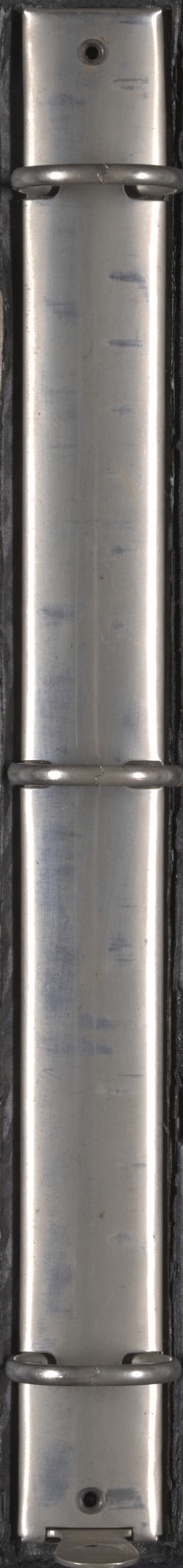


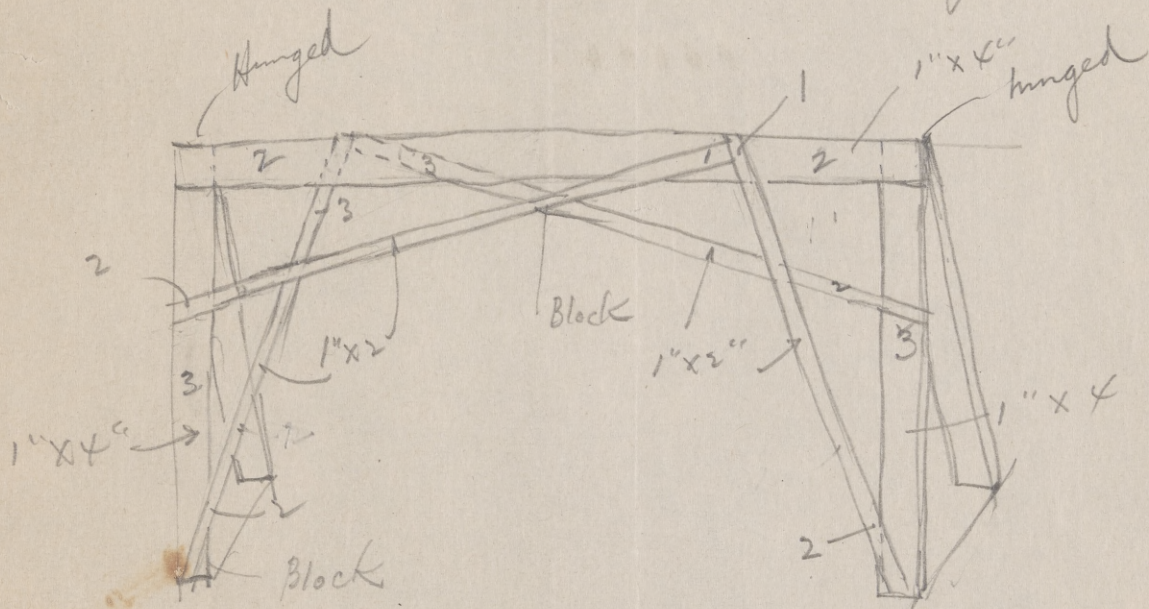


Scholastic
Registered
S.H.KRESS & CO.

A-13847



File Tools + Equipment



Horses.

Directions for preparing CO act.....	26	-	27
General Conditions.....	28	-	47
Special Conditions.....	48	-	51

#

Aug 2. 1944

IDEA FOR SUN AND RAIN SHADE

Insulated
space

1x2 pole
eyes.

4' sections

Hinges

SECTION -
No scales.

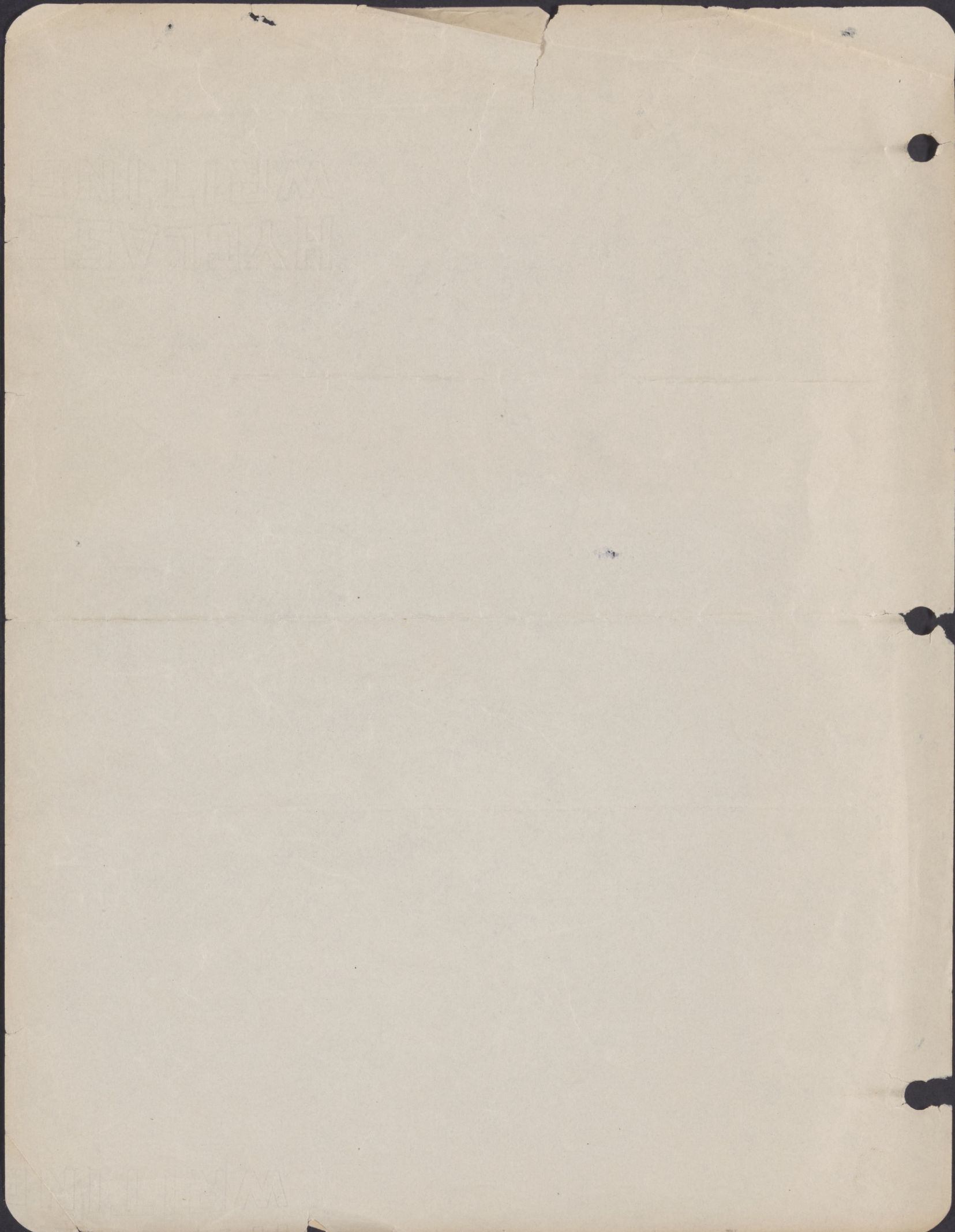
Metal or wood, vanes

Work like old fashioned
window-blinds.

SUN AND RAIN SHADE

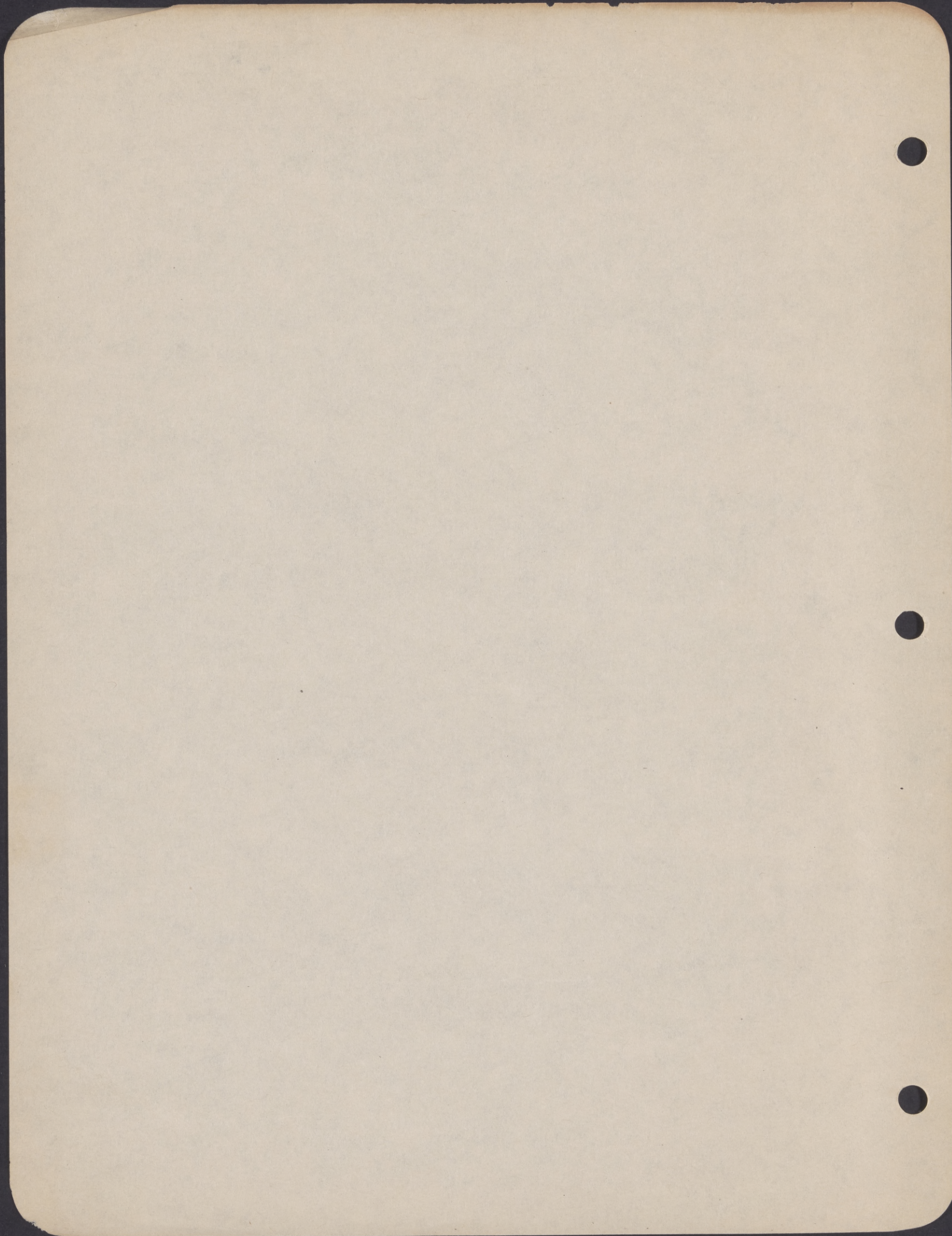
Could be made of
1" x 8" R.W. painted

- ? Aluminum
- ? G.I.
- ? R.W.

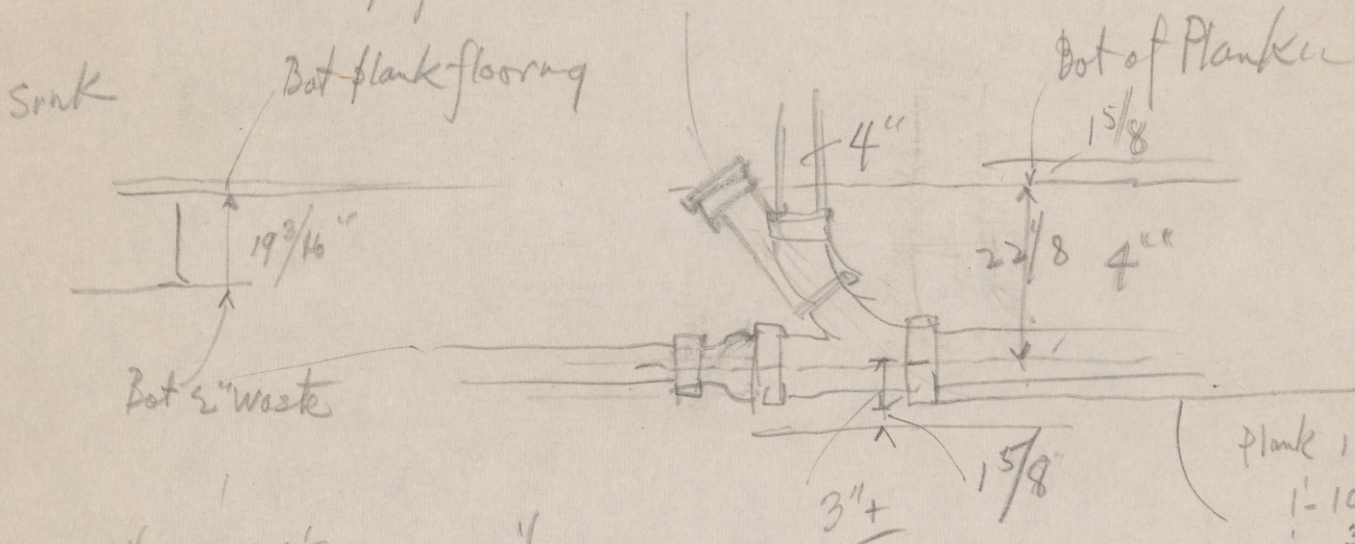


1-22-48
House P.W. Electrical Circuits

5 lights ① L.R. Center Light 5 Use for future Den lts + Peterboy's Bed Room Plugs	3 outlets ④ Breakfast Room Clg. 1 Light over Sink 1 Center Light in Kit. 1 Use for 2nd Fl. Den Addition lts + Plug	FULL 14 outlets ⑦ Breakfast Room Plugs 3 Bracket light in Kit. 1 2 Sink Plugs 2 Work Cabinet Plug 1 Basement Clg Lights 3 Door Bell. Bed Room Plugs 1 W + 1 E 1 Frost Alarm Plug 1 Breakfast Rm Hood Lt. 1	FULL 9 Plugs ⑩ Refrigerator Plug 1 Bed Room Radio Plug 1 Dr. Closet Plug 1 B.R. Basement Plug 1 FULL
12 outlets ② Garage clg lts 4 Screen Porch Lt 1 " " stove plug 1 " " Wash. mach. pl. 1 Outside Garage lts 2 Arbor Light 1 Outside N plug on Garage 1 Garage W. Plug 1 FULL	13 outlets ⑤ Tank House Lt. 1 Patio Stairs + Roof Deck 2 Patio Lights 3 Bath Room Clg. 1 N.E. Bath Plug 1 Patio W. Plug 1 Dressing Clos. Clg. 1 B.R. Clg. 1 Med Cab. lts 2 FULL	⑧ SHED - 5 pull chain outlets with plugs FULL	⑪ Stand outlet in Tank House FULL BATH RM HEATER - B.R. Basement Clg Lt L.R. Basement Clg. Plug
③ L.R. Plugs 5 Patio Plugs N. Wall 2 Reception Hall plug 1 Use for B.R. Basement plugs + S. Den. Basement plug	⑥ Master Circuit FULL	⑨ Water Pump and Saw ← 220 → Saw Use for 2nd floor Bath Room Heater Plug. and Den Basement plugs	⑫ Water Pump and 110 Plug on S. Wall Garage



House P.W. Den Addition 1-17-48
 El. of Bot of Soil Pipe over Dark Rm Door
 and Top of Dark Rm Door C.O.



$$33 \times 1/8 = 4 \frac{1}{8} \quad 25 \frac{1}{8}$$

$$\begin{array}{r} 19 \frac{3}{4} \\ 4 \frac{1}{8} \\ \hline 23 \frac{3}{8} \\ 1 \frac{1}{4} \\ \hline 22 \frac{1}{8} \end{array}$$

Fin Floor - 8' 6"

Top of Door
 to Dark Room

$$\begin{array}{r} \text{Bot hub} - 2-2 \frac{3}{4} \\ \text{on 4" pipe} \\ \text{Jamb} - 1" \\ \hline 1'-10 \frac{1}{8} \text{ Top Door} - 2-3 \frac{3}{4} \\ 15 \frac{1}{8} \\ 3 \checkmark \text{ Fin Bas.} \end{array}$$

$$\begin{array}{r} 15 \frac{1}{8} \\ \hline 8-6 \\ 2-4 \frac{3}{8} \quad 2 \frac{4 \frac{3}{8}}{8} \\ \hline \text{Door} - 6-1 \frac{5}{8} \end{array}$$

$$\begin{array}{r} 22 \frac{1}{4} \\ 13 \frac{1}{4} \\ \hline 24 \\ 8'-7 \frac{1}{2} \\ 1 \frac{1}{2} \\ \hline 8'-6 \frac{1}{2} = \text{Fin Floor} \end{array}$$

$$\begin{array}{r} 3 \frac{1}{4} \text{ Soffit of Arch} \\ 22 \frac{3}{16} \text{ Top of Door} - 2'-3 \frac{3}{4} \\ 15 \frac{1}{8} \text{ Soffit} - 1'-11 \frac{3}{16} \\ \hline 4 \frac{9}{16} \end{array}$$

$$\text{Soffit of Arch} - 23 \frac{13}{16}$$

Use $4 \frac{5}{8}$

$$\begin{array}{r} 21 \frac{1}{8} \\ 3 \frac{1}{8} \\ \hline 17 \frac{1}{8} - 6'-2" \end{array}$$

39.00	2146.30
3.90	23.15
3510	
66.00	21.70
6.10	173.60
	195.30
59.90	180.33
	20.37
254.00	203.70
25.40	3033.32
228.60	233.33
	3266.65

2000.00
3266.65
3733.35

325.73
195.30
130.43

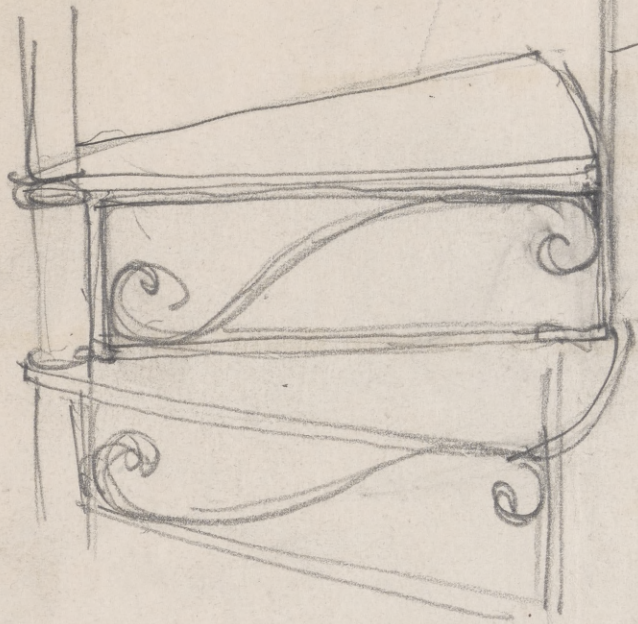
145.00
130.50
14.50

95.00
85.50
9.50

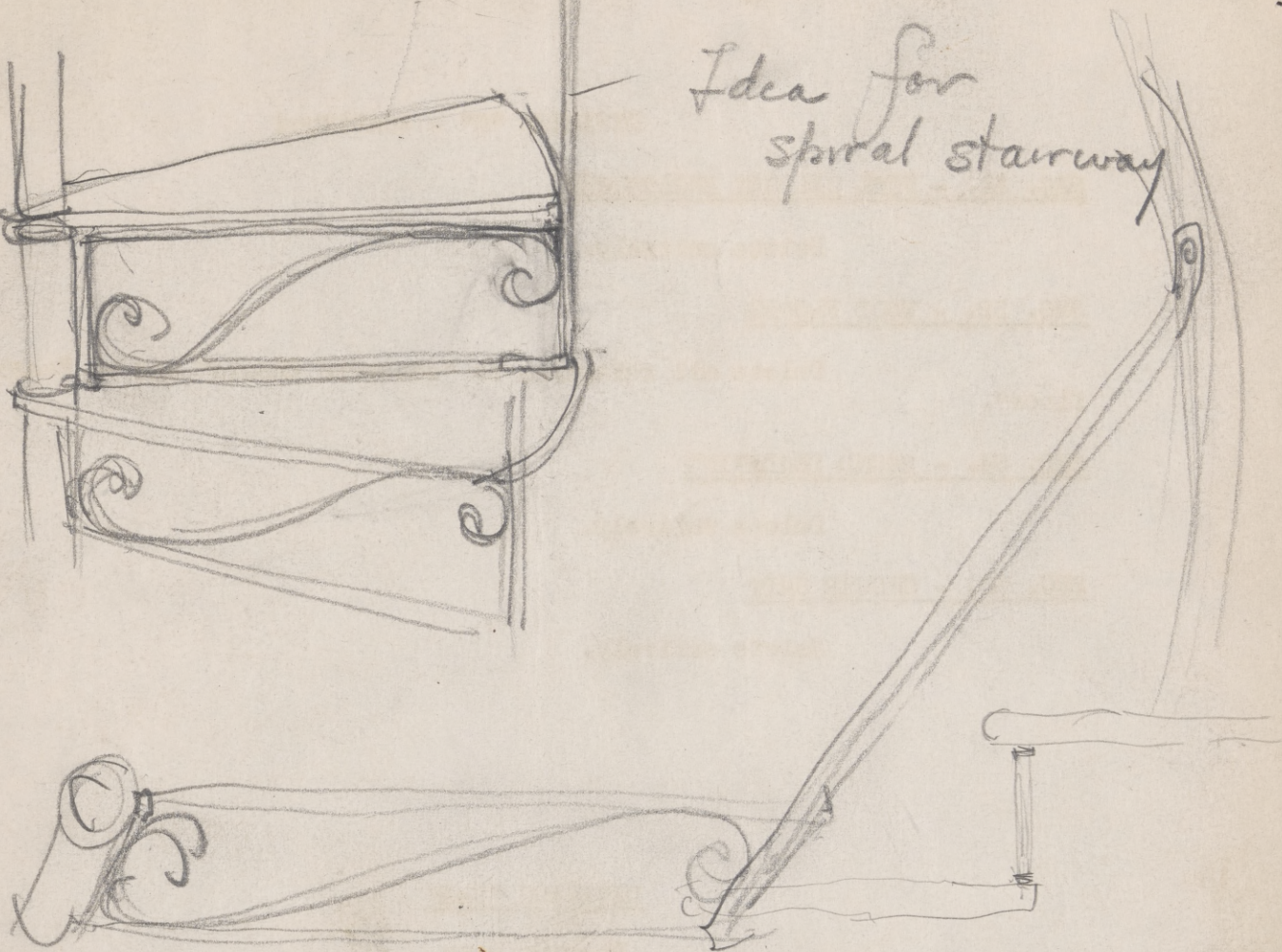
500.30
203.70
305.60

100.00
91.63
8.37

For Addition 3-4-47



Idea for
spiral stairway



DIVISION "C" - continued

SEC. 31. - FUEL OIL CAN ENCLOSURES

Delete entirely.

SEC. 32. - WOOD FLOORS

Delete all reference to "concrete floors" and to "second floor".

SEC. 34. - SOUND DEADENING

Delete entirely.

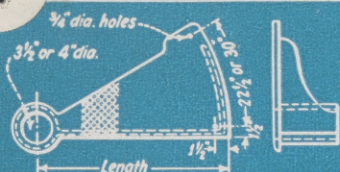
SEC. 35. - SHOWER UNIT

Delete entirely.

DIVISION "C-A"

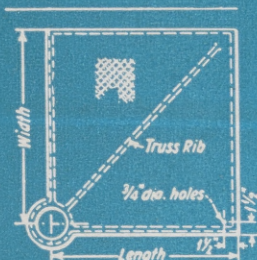
PLASTER WORK

Same as T.D.U. - RX Division "C-A".

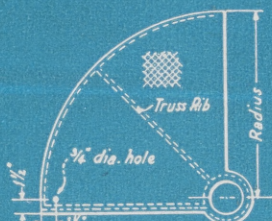


SPIRAL TREAD

Minimum height 8 1/4" to allow sufficient headroom.



SPIRAL PLATFORM
SQUARE



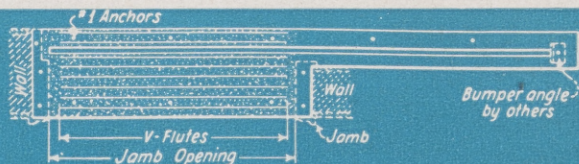
SPIRAL PLATFORM
CIRCULAR

Stock left and right patterns
12 and 16 to a circle in the
following lengths:

24", 27", 30", 33", 36"

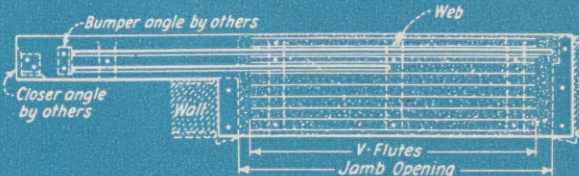
Spiral Treads

PLATE 5



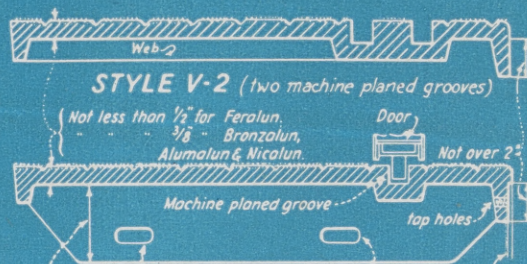
STYLE V-1

for single speed type elevator enclosure



STYLE V-2

for two speed type elevator enclosures



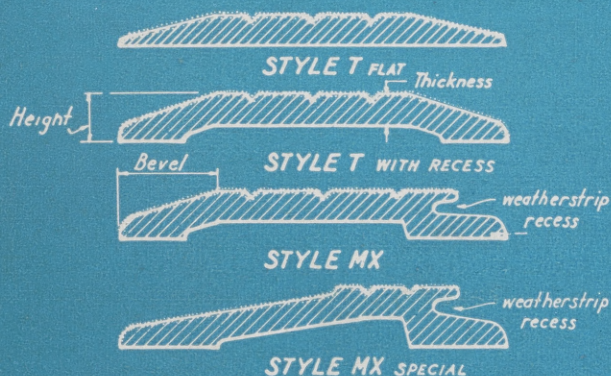
When required lugs will be cast not over 2 1/2".

STYLE V-1 (one groove)

Sills over 9'-6" made in sections

Elevator Door Sills

PLATE 6



STYLE T

two floor hinge cutouts



STYLE T

one floor hinge cutout.

Recommended practice

Usually 1/2" high

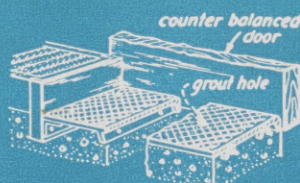
For thickness and

width limitations

see PLATE #1.

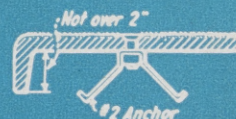
Door Saddles

PLATE 7



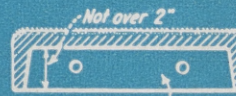
STYLE W

for service elevator opening

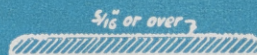


STYLE W

Recommended practice	
1/2" thick for Feralun	
3/8" - - - - -	{ Branzalun, Alumalun & Nicalun.
Over 9'-6" made in sections	

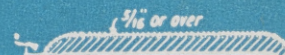


STYLE W-W



STYLE L

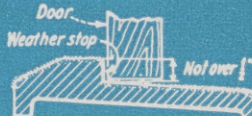
With floor hinge cutouts
refer to detail on plate #9



STYLE A-A



STYLE M
Standard

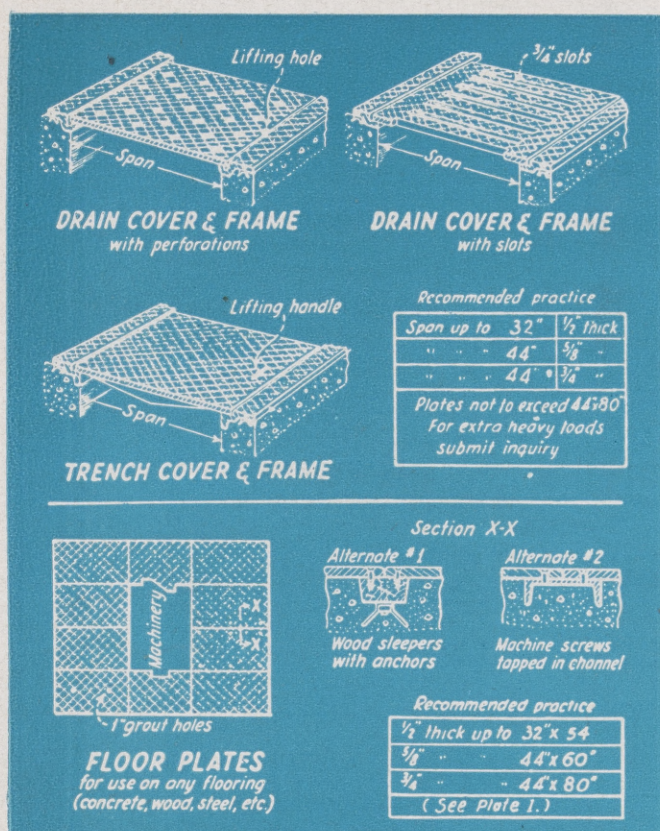


STYLE M
Special

Door Saddles

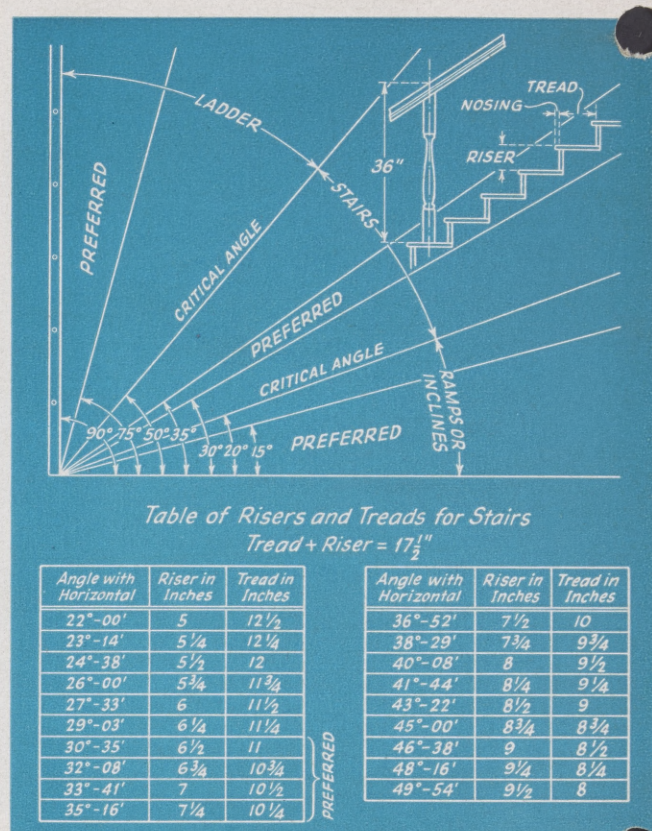
PLATE 8

DETAIL SHEETS—Feralun • Bronzalun • Alunalun • Nicalun • Products



Floor Plates - Trench Covers

PLATE 9



Correct Angles for Ladders, Stairs and Ramps PL

SPECIFICATIONS FOR FERALUN TREADS

SAFETY TREADS—All concrete and cement finished steps shall be provided with Feralun Anti-Slip Treads, Style (A, C or D) as made by the AMERICAN ABRASIVE METALS CO. Treads on reinforced concrete steps shall be (3, 4 or 6 in.) wide and shall extend to within (3 or 4 in.) of the stringers. Style (C or D) treads shall be (4, 5, 6 or 7 1/2 in.) wide and Style A on pan-filled type shall extend the full length of the step. The surface of the treads shall be kept free of cement.

STEEL STAIRS WITH RISERS—Steel stairs with risers shall be equipped with Feralun Anti-Slip Treads as made by the AMERICAN ABRASIVE METALS CO.

Style (O, S or K) bolted to risers front and back and to carrier angles or stringers—

or, Style "R" with end lugs for open stairs bolted direct to stringers—

or, Style "OO" bolted to carrier angle attached to stringers.

Lengths and widths as detailed on plan. (See plate 3 for widths and thickness table.)

SPIRAL STAIRS—Spiral treads and platforms shall be of Feralun as made by the AMERICAN ABRASIVE METALS CO. They shall be of stock pattern to suit conditions.

DOOR SADDLES—Exterior entrance, fire and roof door openings shall be provided with saddles of (Feralun, Alunalun,

Bronzalun, Nicalun) anti-slip material as made by the AMERICAN ABRASIVE METALS CO., Style (T, L or M). When required, saddles shall be cast to receive floor check hinges. Style M saddles shall be made with rebate to act as weather stop.

Interior door openings shall be provided with (Feralun, Bronzalun, Alunalun, Nicalun) anti-slip saddles, Style (T, L or A-A) with (fluted, plain or hatched) surface. Saddles shall be full width of partition wall and shall extend the full width of door openings between jambs.

ELEVATOR DOOR SILLS—Passenger elevator door openings shall be provided with sills of (Feralun, Bronzalun, Alunalun, Nicalun) anti-slip material as made by the AMERICAN ABRASIVE METALS CO. Sills for sliding doors shall be full width of the wall thickness and shall have machined grooves.

Where freight elevator doors are of the non-sliding type, the openings shall be provided with sills of Feralun anti-slip material, Style W, with lip extending down the shaft side. They shall be full width of the wall thickness.

FLOOR PLATES—Floor plates shall be of Feralun anti-slip material as made by the AMERICAN ABRASIVE METALS CO. Plates shall be cast with truss ribs and be of sufficient thickness to support a live load (state pounds) per square foot.

Trench covers and Frames as indicated on the plans shall be made of Feralun anti-slip material of the dimensions and thicknesses shown on the detailed drawings.

McNeill Ornamental Iron & Construction Co.
Baltimore, Maryland

FILE NUMBER
I. A. 14 D

McNEILL SPIRAL STAIRS

Manufactured by

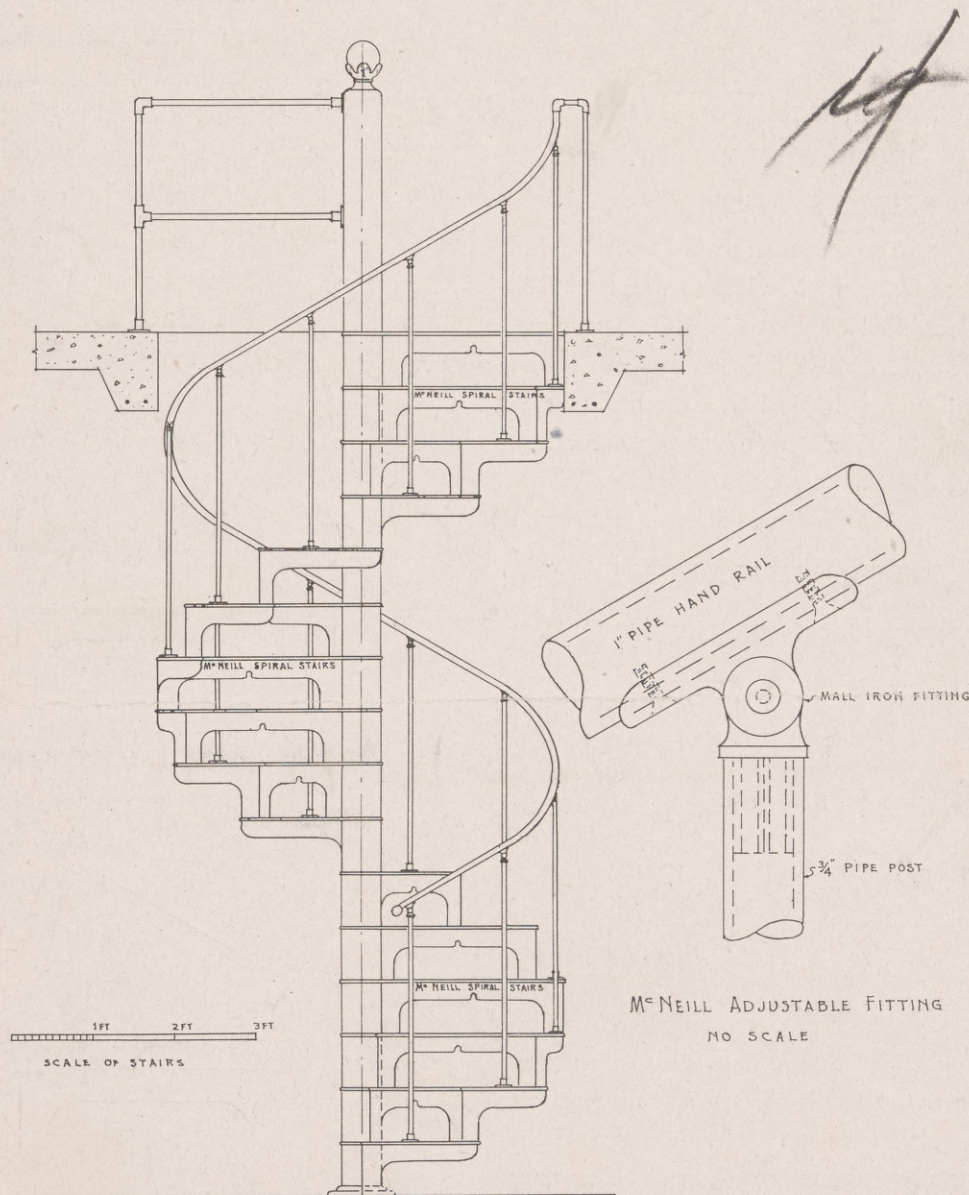
The McNeill Ornamental Iron & Construction Co.

460-462 E. Cross Street

Baltimore, Maryland



1929



FILE NUMBER
A. I. A. 14 D

STAIRS, Spiral

McNeill Ornamental Iron & Construction Co.
Baltimore, Maryland

McNEILL SPIRAL STAIRS

The ease with which our Spiral Stairs may be assembled at the job and their neat appearance make them ideal for use in Schools, Churches, Office Buildings, Storage Buildings, Factories, Armories, Theatres, Sewage Disposal Plants, Power Plants and many other places where the saving of floor space is essential.

McNeill Standard Construction

consists of 3" or 4" center pipe, cast iron treads with 1" pipe hand rail and $\frac{3}{4}$ " pipe uprights, one to a tread, as shown on front page.

Copy For Architects To Insert In Specifications

SPIRAL STAIRS

Furnish and erect where shown on plans McNeill Spiral Stairs as manufactured by the McNeill Ornamental Iron & Construction Co., 460-462 East Cross St., Baltimore, Md. Stairs to beinches diameter andfeet high of cast iron diamond surfaced treads, center pipe 3" I. D. for 42" and 48" diameter and 4" I. D. for 54", 60", 66", 72" and 84" diameter stairs. Hand rail of 1" I. D. pipe on stairs and around well hole. Finished size of floor opening to be 2" larger than the diameter of stairs.

STANDARD STOCK SIZES

Diameter	Center Pipe	Treads to the Circle
48"	3"	12 — 16
54"	4"	12 — 16
60"	4"	12 — 16
66"	4"	12 — 16
72"	4"	12 — 16
84"	4"	12 — 16

42" diameter stairs can be furnished with 3" center pipe and 12 treads to the circle. We, however, do not recommend this size as the treads are too narrow to allow easy access up and down the stairs. We recommend the 60" diameter as the best size to use where sufficient floor space is available.

DIRECTIONS FOR ORDERING

Give height from finish floor to finish floor and state kind of floor construction.

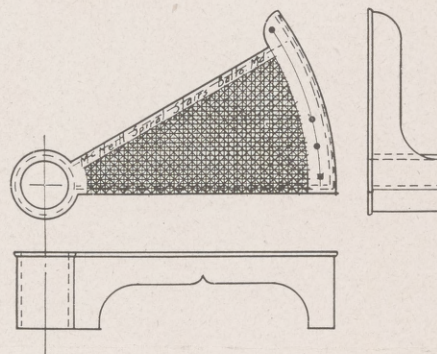
State if center pipe rests on finish floor or on a support below floor. State if stairs are to be right hand or left hand. (The detail cuts on opposite page show right hand) To allow clearance for hand rail the opening in floor at top of stairs should be 2" larger than the diameter of stairs.

To allow sufficient headroom the risers should not be less than 8". In laying out the stairs calculate the number of risers required allowing from 8" to 9" to each riser and 12 or 16 treads to a turn.

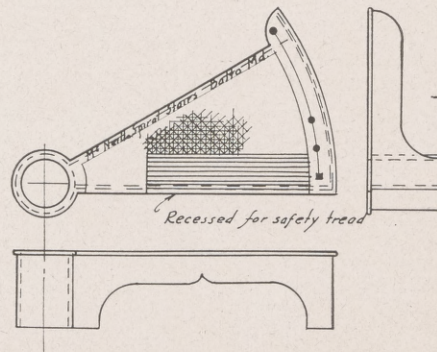
The starting and landing points are then determined and whether a right hand or a left hand stairs best suits conditions at building.

Blueprints of our shop order showing lay-out of stairs and complete bill of material are sent to customers for approval before starting the work.

Tread Details



RISE AND TREAD DETAIL
MADE FOR RIGHT OR LEFT HAND STAIRS

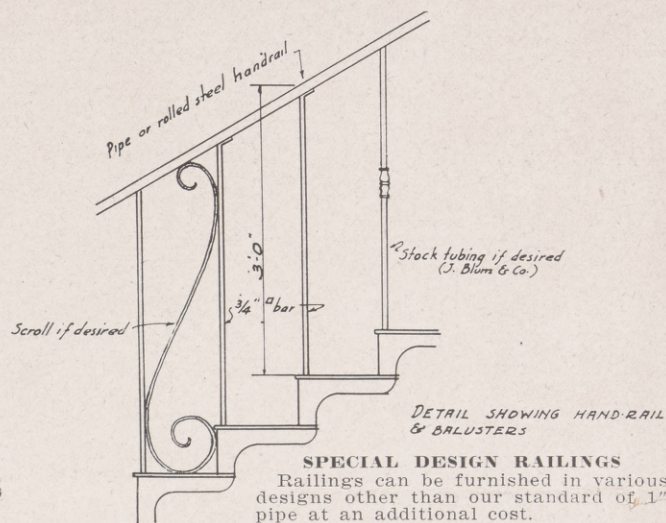


TREADS MAY BE HAD RECESSED TO
TAKE 4" x 16" SAFETY TREAD

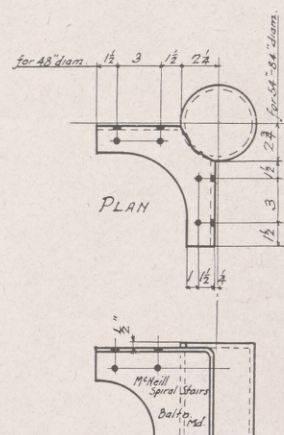
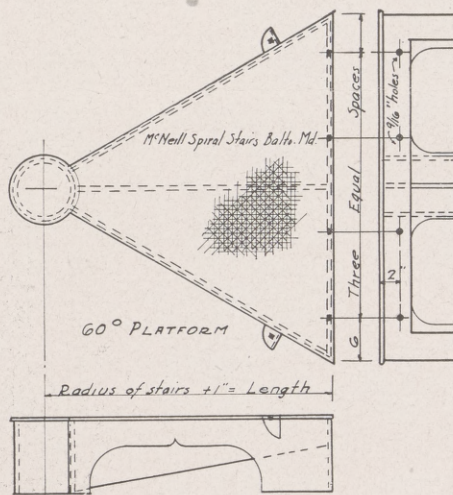
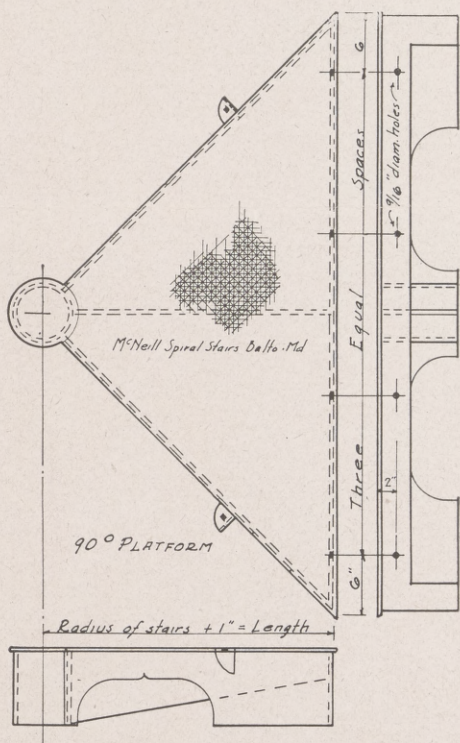
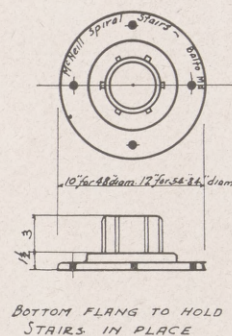
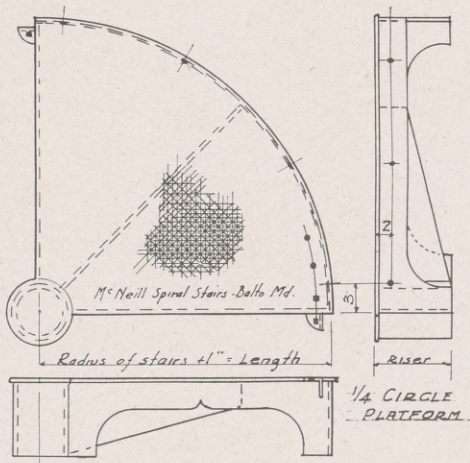
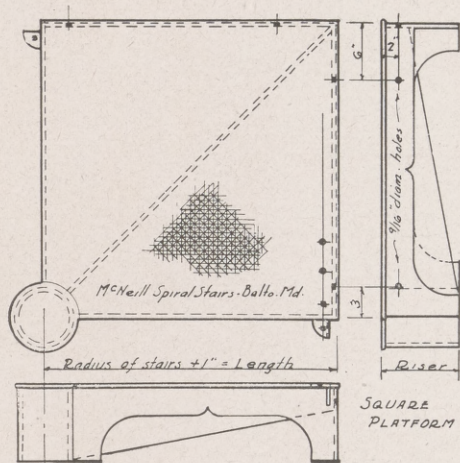
Standard Details of Materials Carried in Stock for McNeill Spiral Stairs

TABLE OF SIZES OF PLATFORMS AND FLOOR OPENINGS

Diam. of stair	Center Pipe	Platform		Floor opening	
		Square	Circular radius	Square	Round
42"	3"	22"x22"	22"	44"x44"	44" diam.
48"	3"	25"x25"	25"	50"x50"	50" diam.
54"	4"	28"x28"	28"	56"x56"	56" diam.
60"	4"	31"x31"	31"	62"x62"	62" diam.
66"	4"	34"x34"	34"	68"x68"	68" diam.
72"	4"	37"x37"	37"	74"x74"	74" diam.
84"	4"	43"x43"	43"	86"x86"	86" diam.



PLATFORM DETAILS



USED WITH DIAMOND
PLATE PLATFORMS

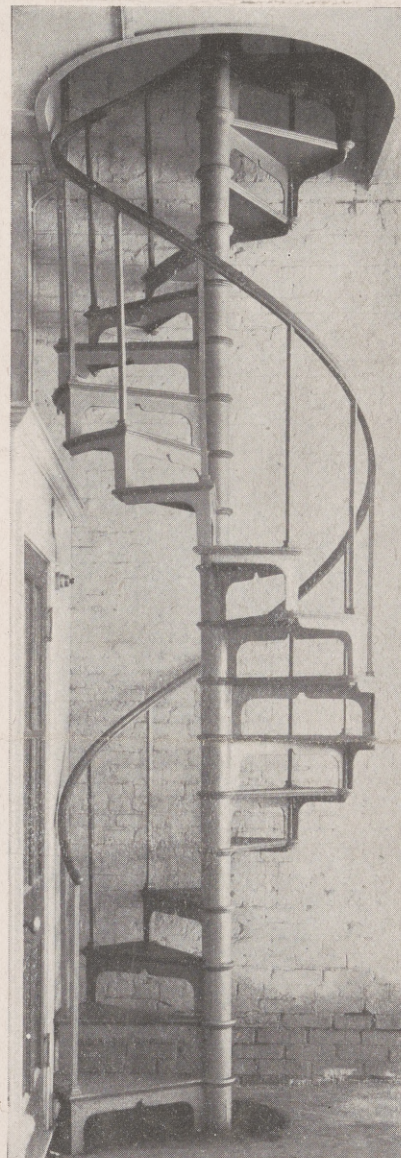
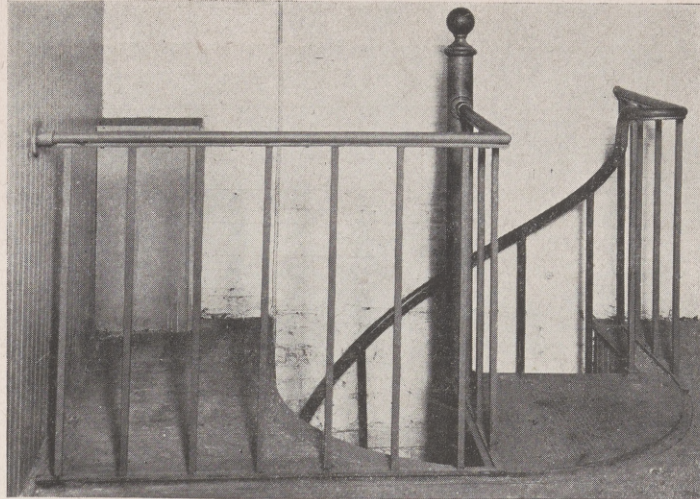
FILE NUMBER
A. I. A. 14 D

STAIRS, Spiral

McNeill Ornamental Iron & Construction Co.
Baltimore, Maryland

McNEILL SPIRAL STAIRS

This stairs was furnished
by us for Henderson, Lin-
thicum & Co., Commission
Merchants, Baltimore, Md.,
and is a left hand stairs.



The McNeill Ornamental Iron and Construction Co.
460-462 E. Cross Street :: Baltimore, Maryland

FILE NUMBER
A. I. A. 14 D

McNeill Ornamental Iron & Construction Co.
Baltimore, Maryland

14d

or drill and tap?
Carrriage bolt

rubber tread - or plain carpet

3-21-47

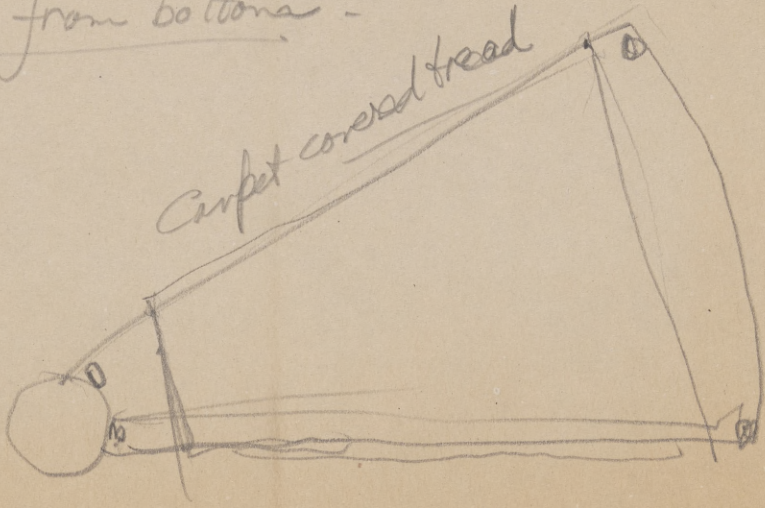
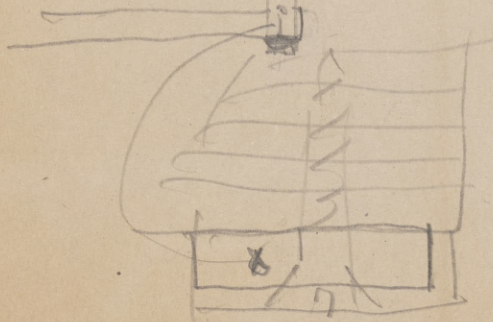
Weld
Parabolic curve
Wet
 $\frac{1}{4} \times 1$?

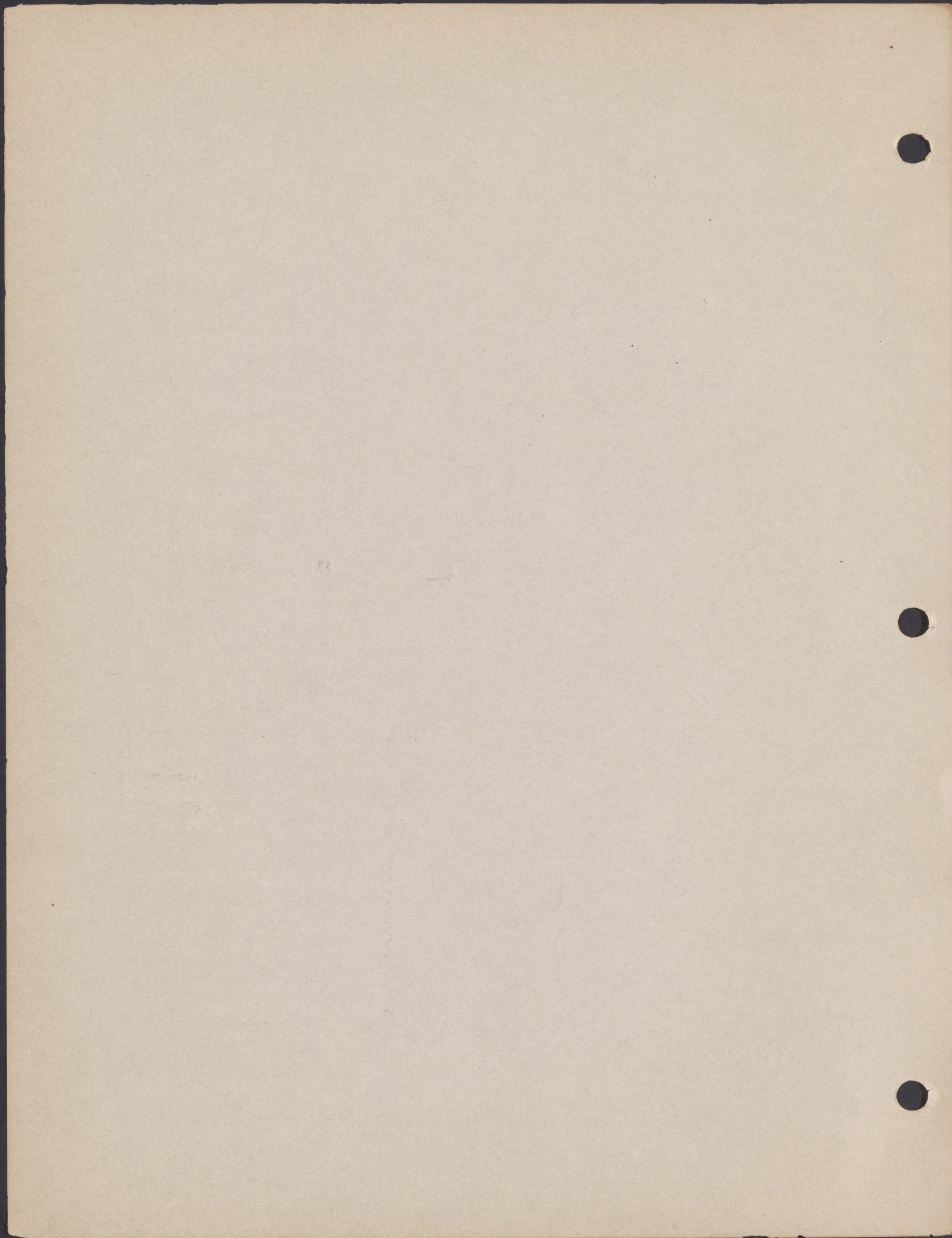
1" Ply wood

covered with rubber tread or carpet

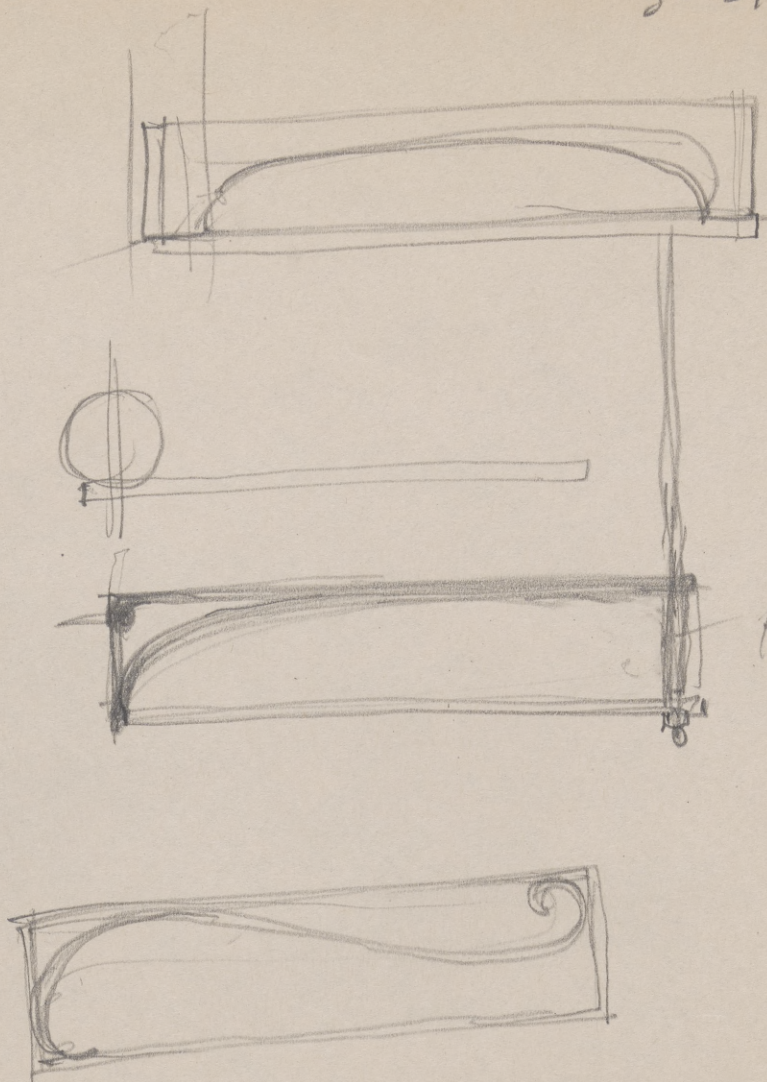
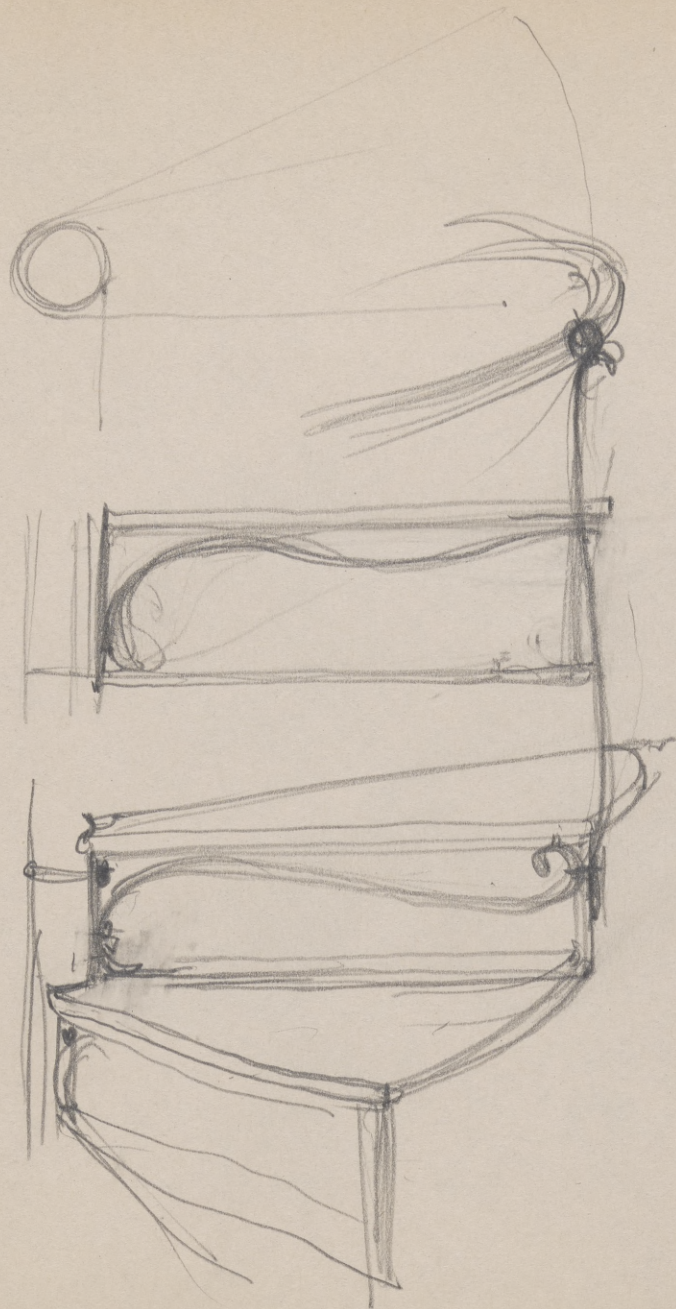
All screws up from bottom -

Carpet covered tread

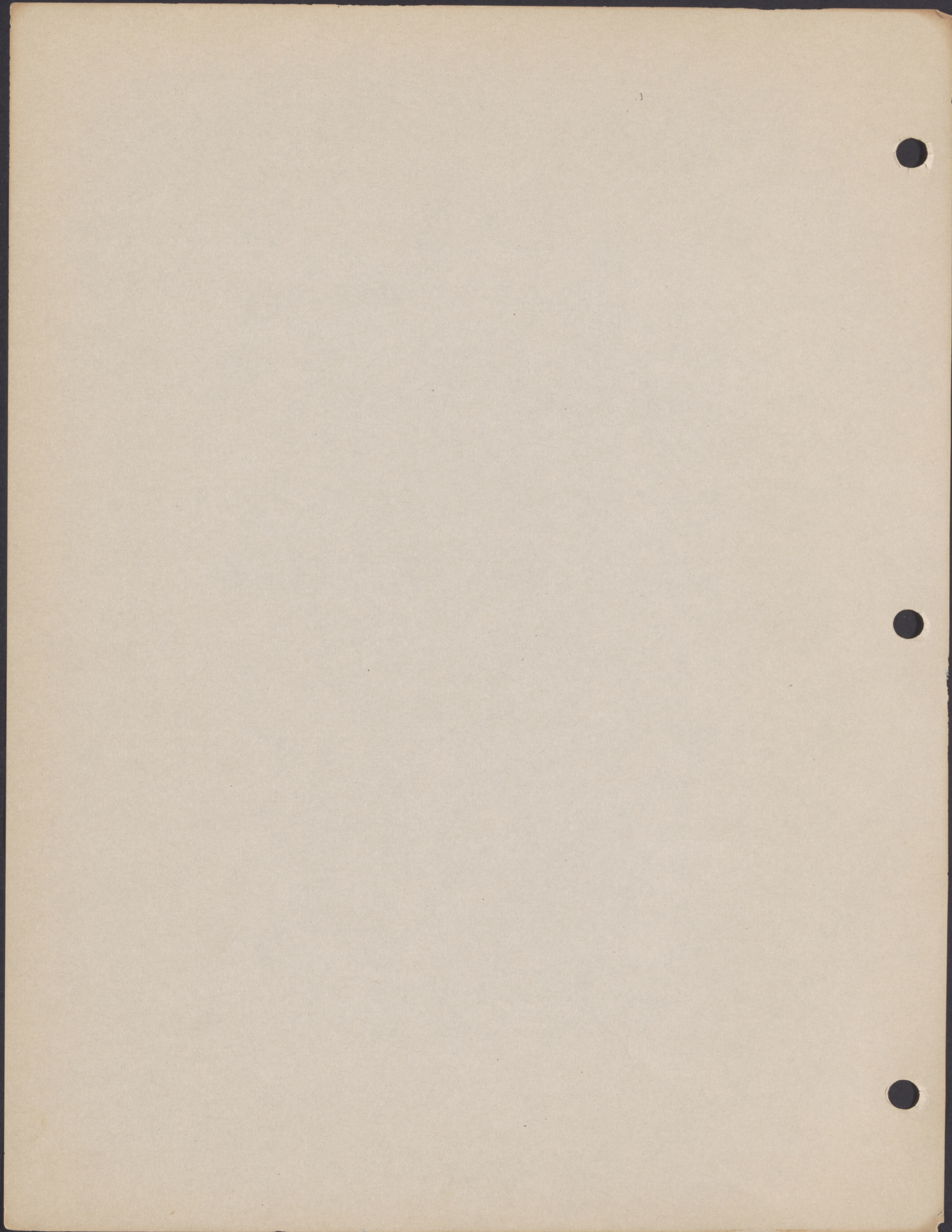




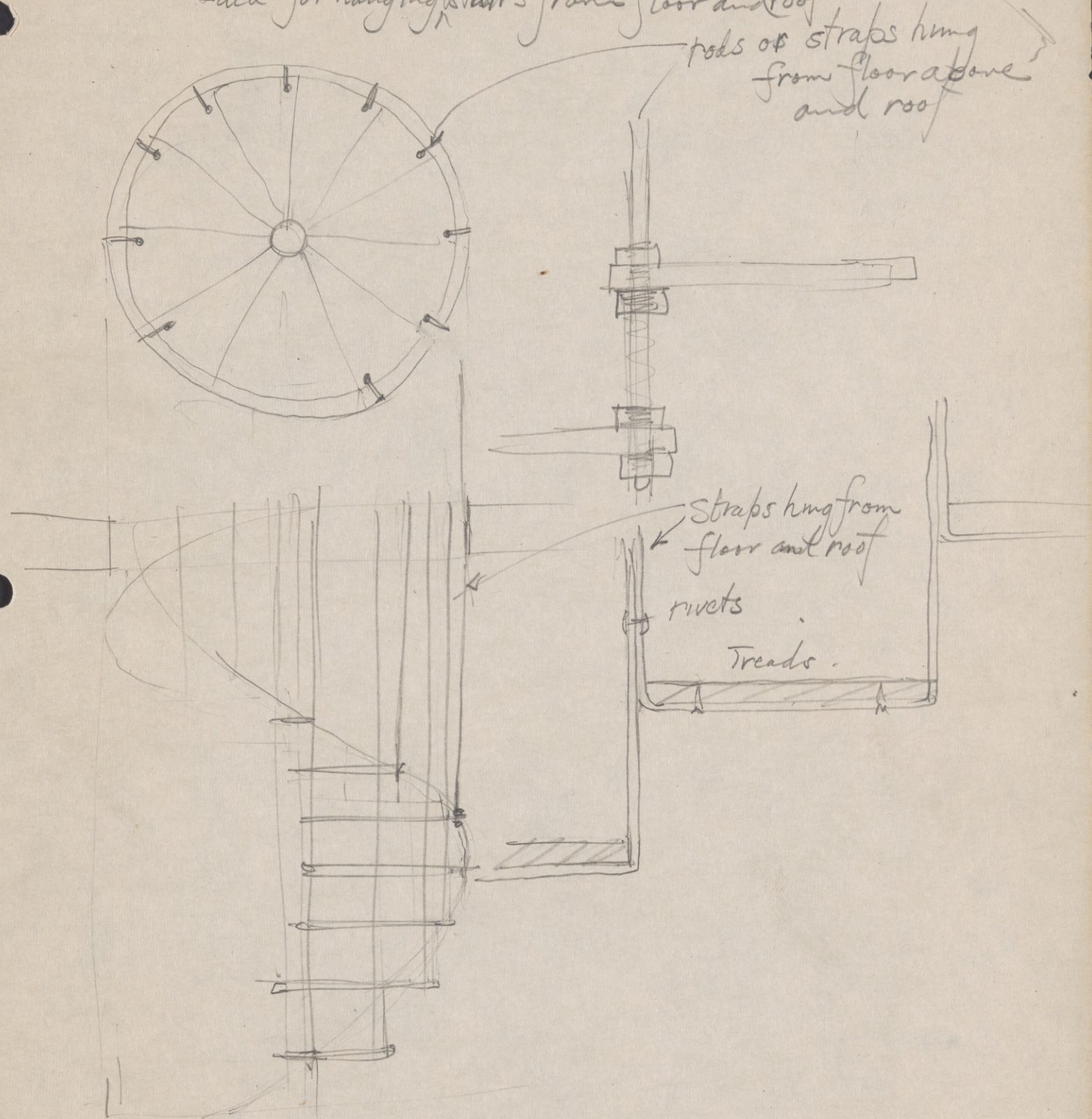
3-21-49

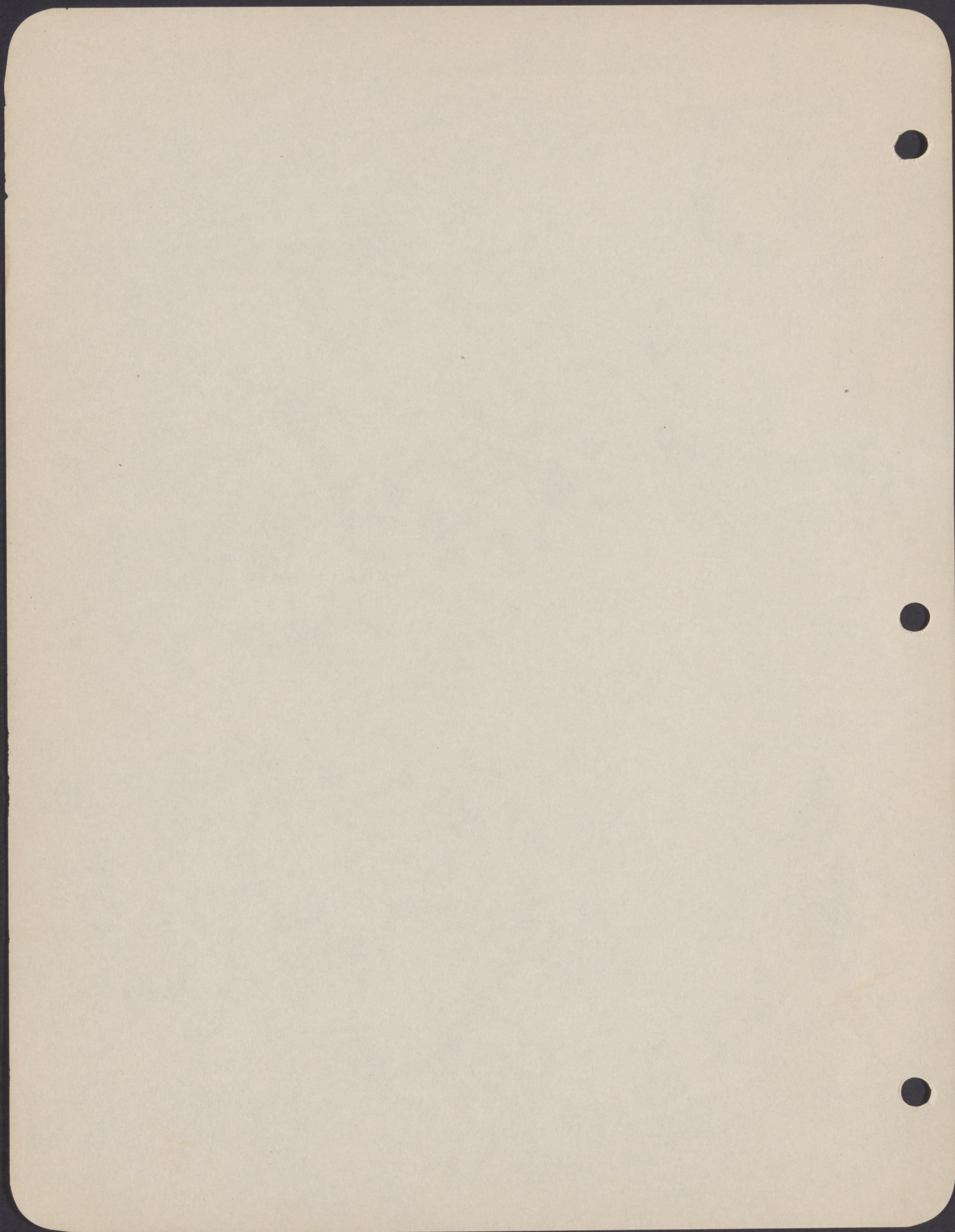


pipe



House P. W. Den Addition 9-12-47
Idea for hanging ^{spiral} stairs from floor and roof





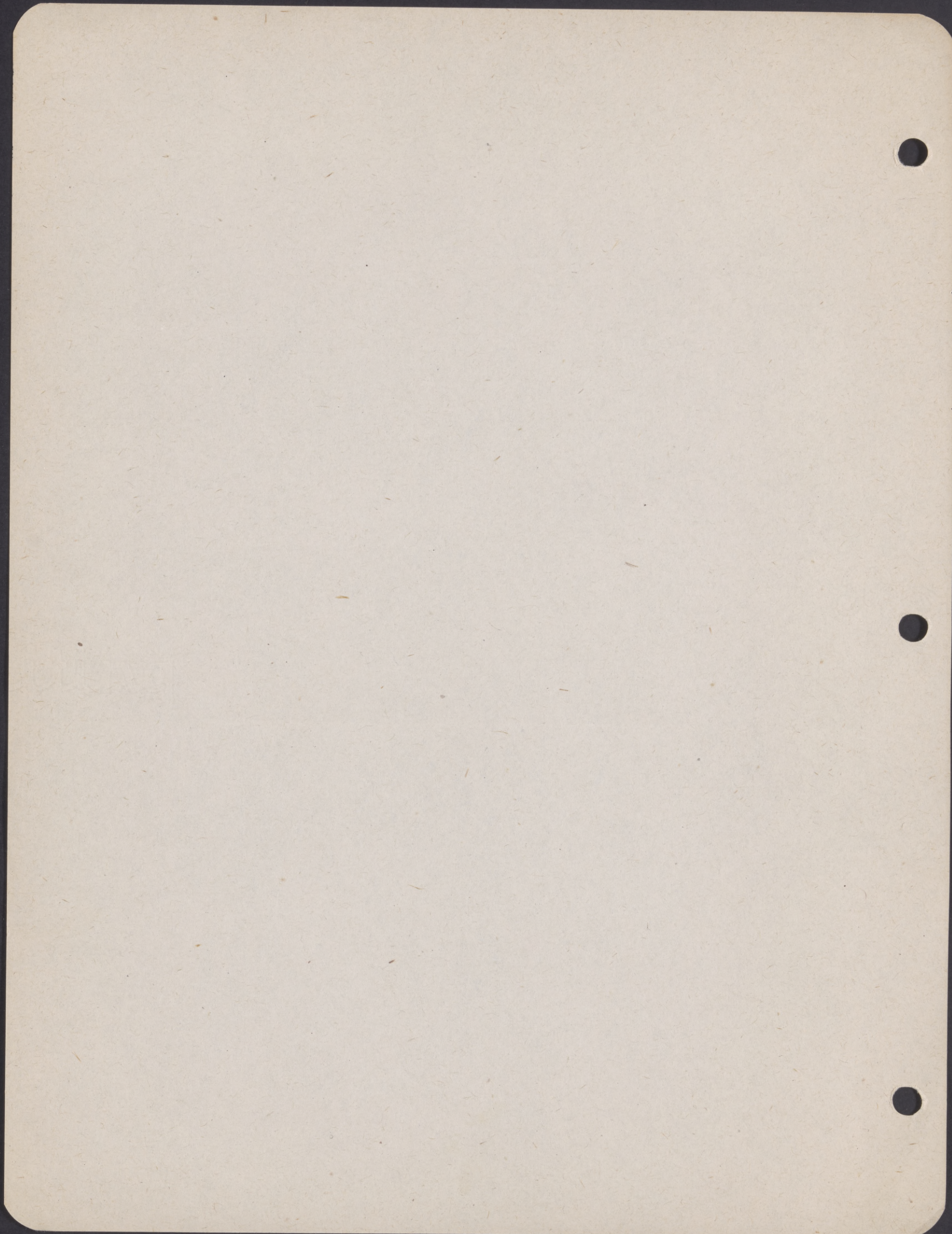
Den Addition.

2-7-47

Oil Heater - Meas. Sears 1929-40 - 38" hi - 18" wide -
26" deep - - P.W. Heater 26" Deep.

3-18-47

Make computations for cooling system.



Addition

Fin Fl = $3' - 2\frac{1}{4}"$ below instrument = $+0 - 0$
 $+10' - 6\frac{1}{2}"$

Top rail $+10 - 2 \frac{5}{8}$
 $= +13 - 4 \frac{7}{8}$

L.P. of roof $+ 10 \cdot 0 \frac{3}{8}$

But ceiling + 6'-3 3/4" = But rail
+ 9'-6" + 10'-4"

Top rail $+10'-6\frac{1}{2}"$
 $= +13'-8\frac{3}{4}"$

3'-4½" Top roof
at N.B.R wall

Bot Cerling + 6-7 "
+ 9-9 1/4 "

$$F_L = \pm 0.0'$$

Top Conc - 4'-15/8
- 0'-10 3/4

Dirt - $4\frac{5}{8}$ ft

Top Sewer -1'-3 1/2"

Top water pipe $-5' - 10^5/8$
 $-2' - 8 \frac{3}{8}"$

+ 8-5/8
+ 11-7 3/8
Bot sheathing

Bot Sheathing
-2-8 1/8
+5-10 1/8
9-0 3/8

~~Soft Lamb + 3' 4"~~
~~+ 6' 6 1/4"~~

ceiling - 3'-13/4"
+ 0'-1/2" B.R. fin fl
- 3'-2"

$$\begin{array}{r} -3 \cdot 2 \cdot 4 = \\ +0' - 0'' \end{array}$$

Top Concrete
3:10

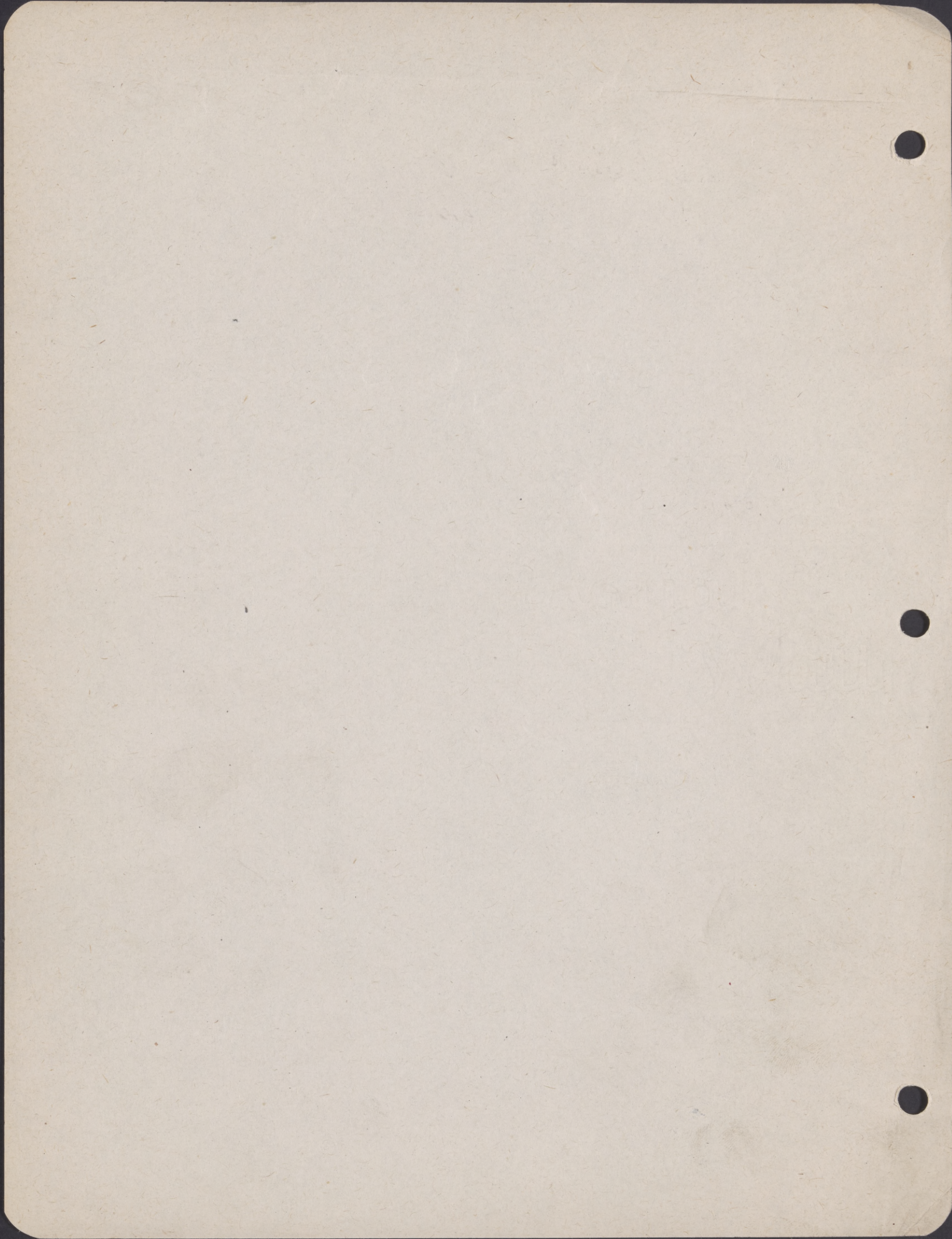
Top water pipe
- 5' 4" $\frac{1}{4}$

Top Sewer - 5' - 10 7/8"
Top Water pipe - 5' - 10 5/8"
- 2 - 8 3/4"

Top Sewer
-5' 5 5/8
-2' 3 3/4

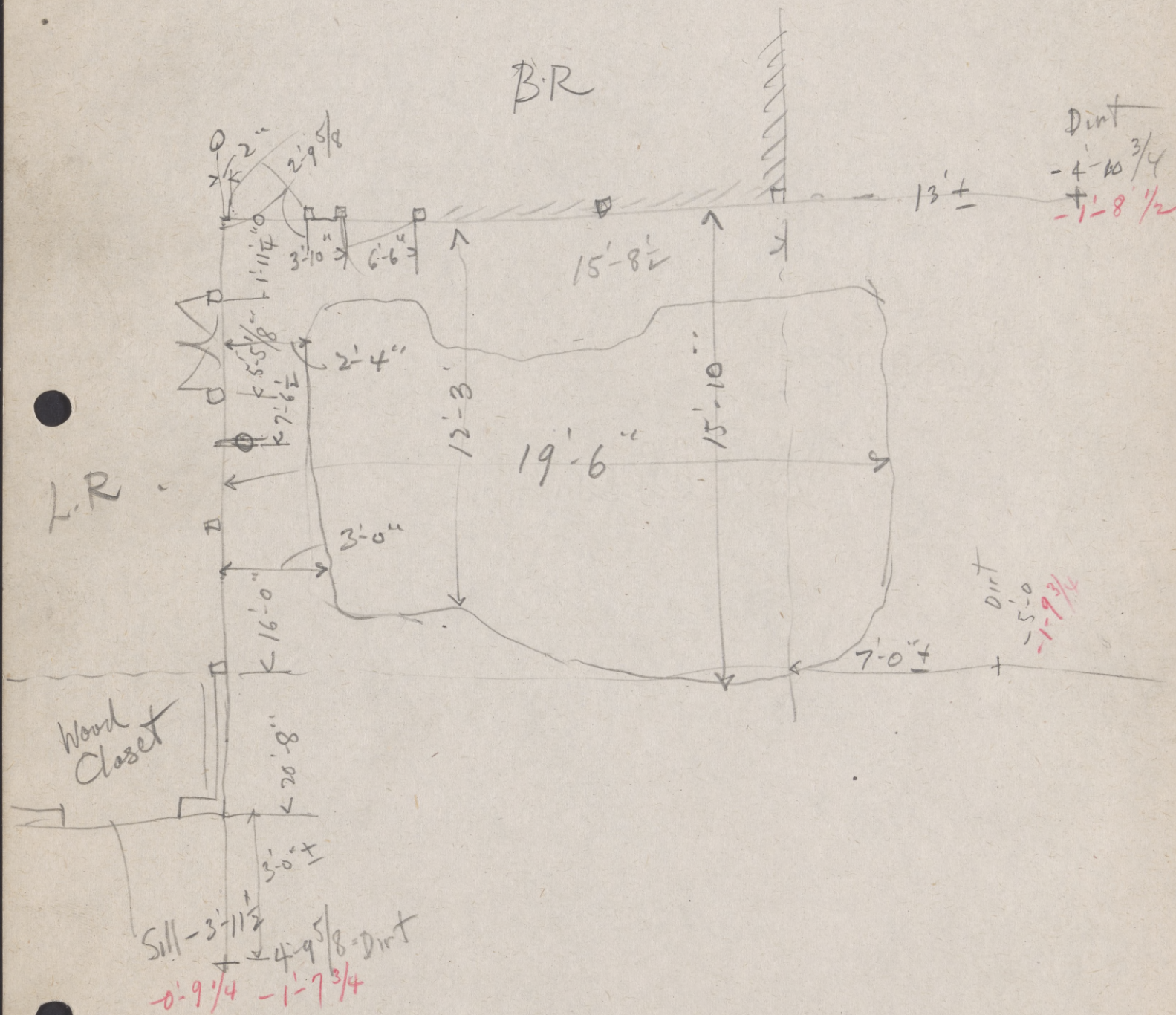
Pres Basement dirt - 7 1/10" Average. Excess 6 3/4"

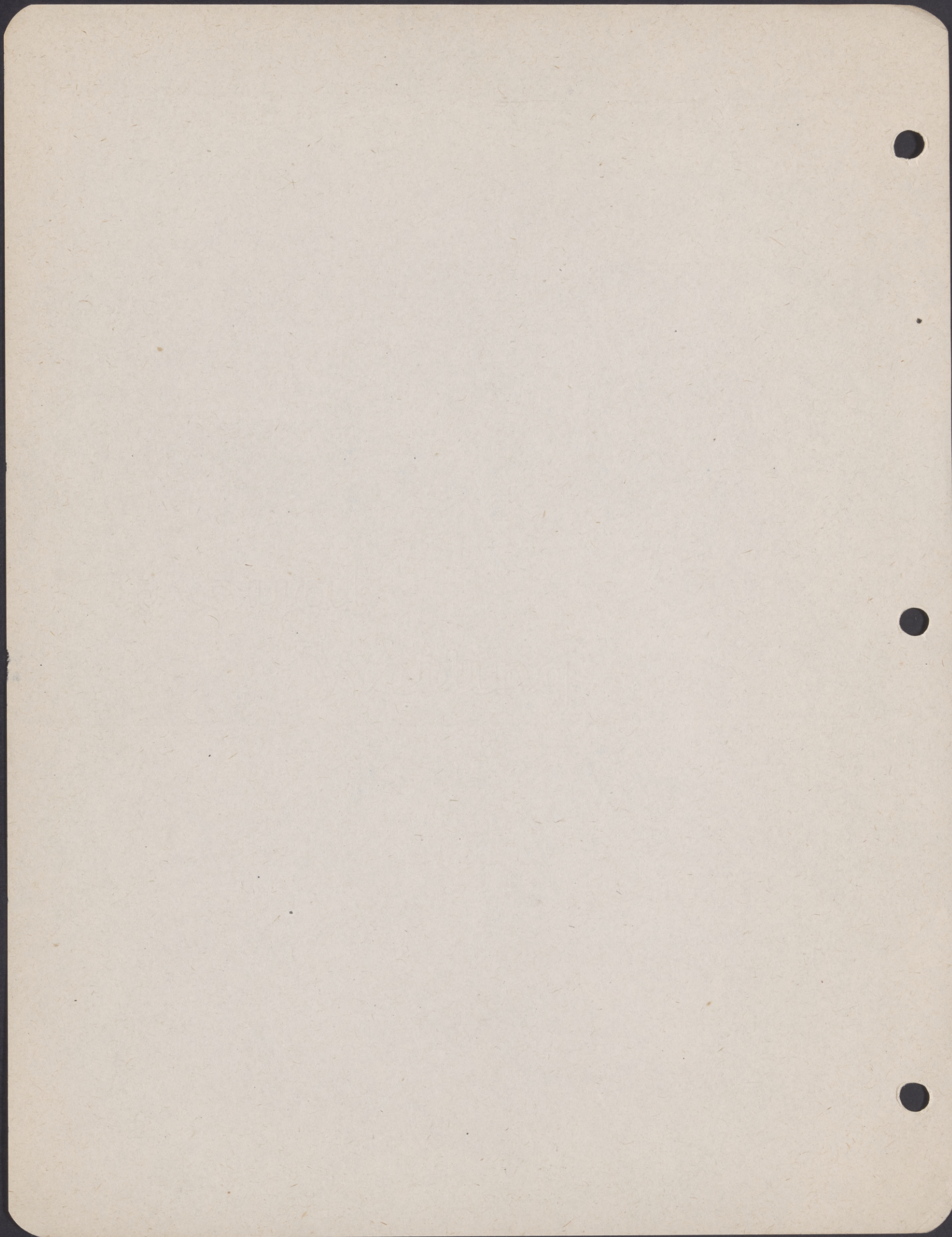
Excavation - 9-5/2
-6' 3 1/4



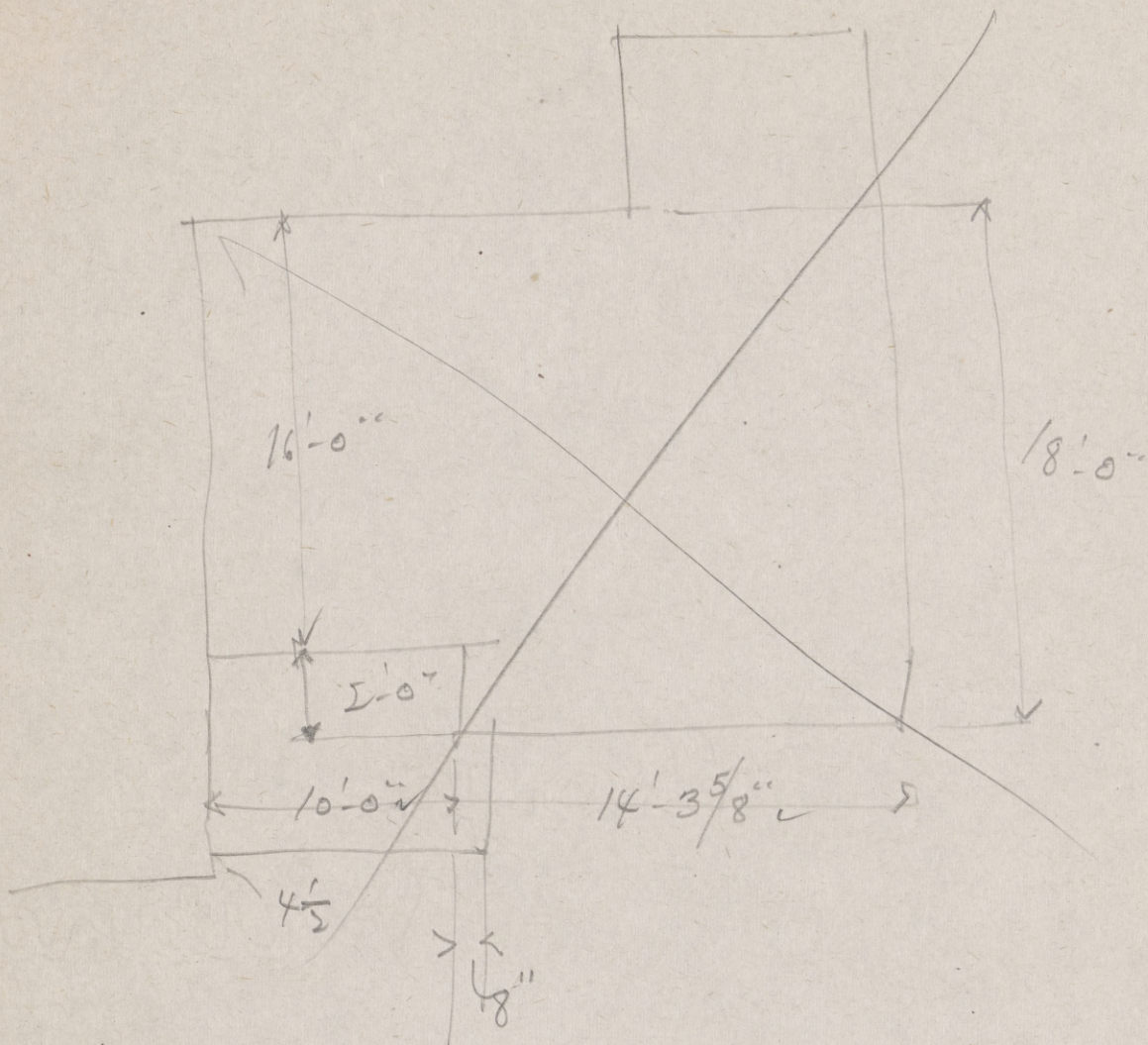
Measurements + Levels for Den Addition

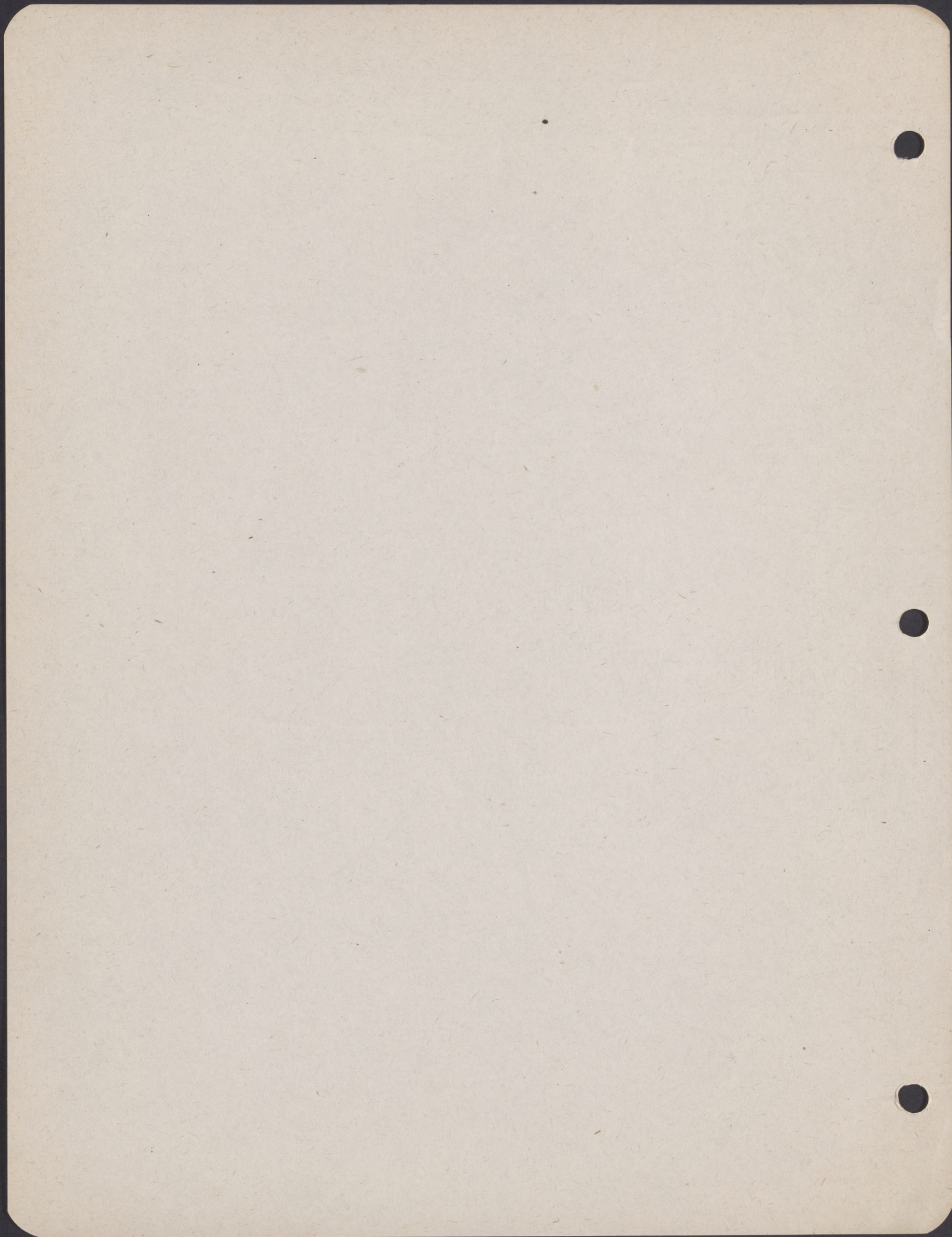
1-26-47





House P.W. Den Addition. Feb 23. 1947





Hance P. W.
 Den Addition.
 Engineering.

Feb 23, 1947.

$F = 1200 \text{ #/sq in}$

Rafters - Span 18'-0"

Load Live 15 #

Tile 15 #

Roofing 3 #

Sheathing 3 #

Insulation 2 #

3"x3"-24" o.c 1 #

Ceiling 3 #

Rafters 3 #

Total 45 #

Total load per joist -

18' x 2' x 45 # = 1640 #

2"x10" good for 1086 # bending

for deflection $\frac{1}{360}$ $849 \times 2 = 1698 \text{ #}$

O.K. for deflection -

2x10 - S = 24.44

73.32

3-2"x10"-48" o.c O.K.

For rough timbers - Conversion factor 2x8 $R_o = 1.40$

$\frac{M}{f} = \frac{W L^3}{f 8}$ $S = \frac{45 \times 2 \times 18 \times 18 \times 12}{1200 \times 8} = 36.4$ Use 2-2"x12"-4'-0" o.c

1-2"x12"-2'-0" o.c O.K.

$S = 2 \times 8 S 48 = 15.23 \times 1.40 = 21.7$ $\frac{10 \times 46 \times 200}{14400} = 1.5$ $- \text{Av. } 36" \text{ o.c} - S_{\text{required}} = 36.4 \times 1.5 = 54.6$

$= 21.7 \times 2 = 43.4 \text{ O.K.}$ $- 2-2"x10"-4'-0" \text{ and } 2'-0" \text{ Alt. O.K.}$

Deflection for 2-2"x8" R_o or 4"x8"

$d_{\text{max}} = \frac{5 W L^3}{384 E I} = \frac{5 \times 1640 \times 216^3 \times 12}{384 \times 1.2^6 \times 4 \times 8^3}$

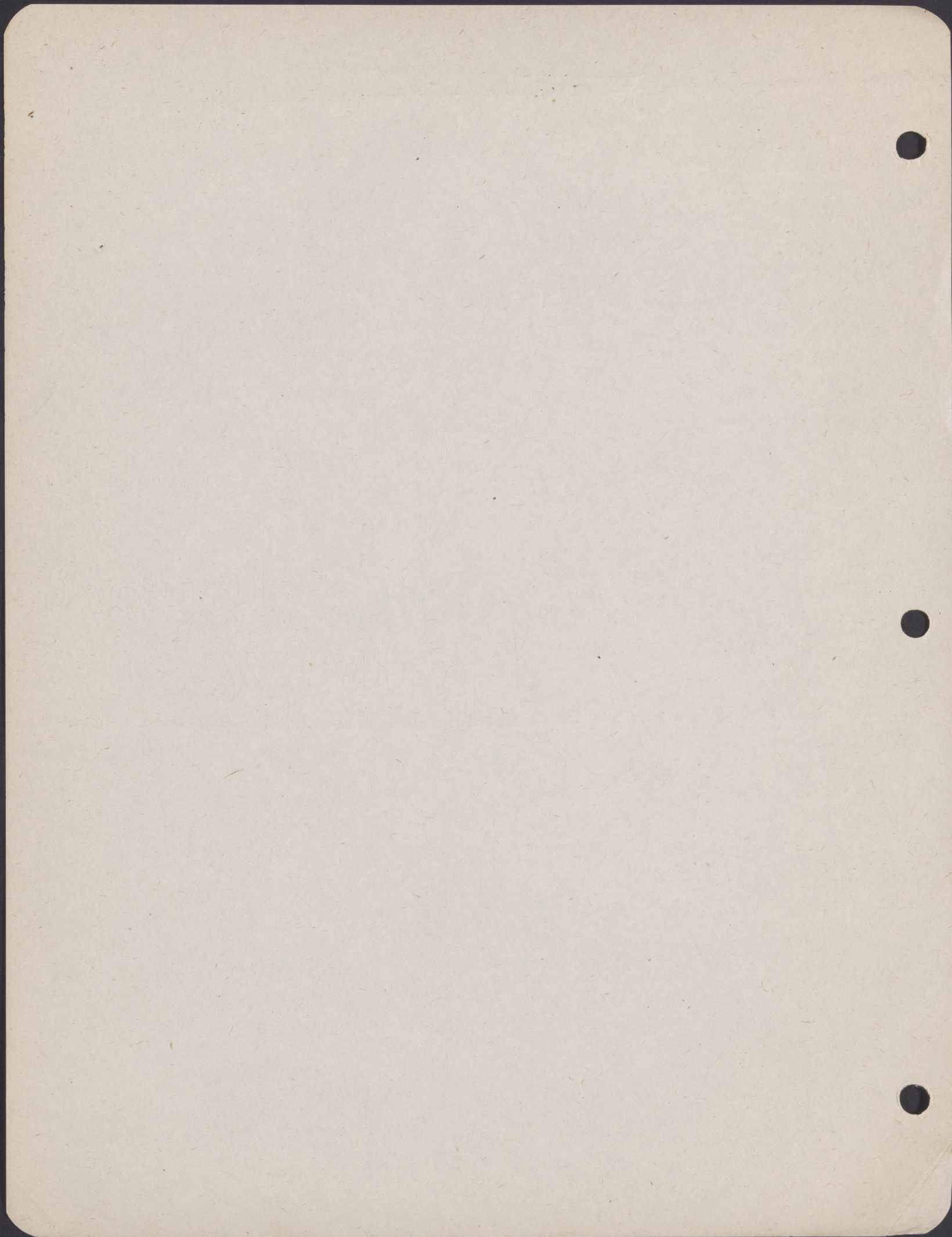
$= \frac{5 \times 1640 \times 216 \times 216 \times 216 \times 12}{384 \times 1.2^6 \times 4 \times 8 \times 8 \times 8} = 1.03" \text{ (too much deflection)}$

$5 \times 2444 \times 200 \times 244 \times 200 \times 10$
 $400 \times 16 \times 30 \times 60$

If = 1.6
 $d = \frac{1.2}{1.6} \times 1.03 = .772$

Use 2-2"x10" S48 or rough.

$\frac{3}{4}" + (\text{too much})$
 SUPERCEO



House P.W. Den Addition 2-23-47

Rafters Span 16'-0"
Total load 45[#]

Load per joist = $2 \times 16 \times \frac{45}{32} = 1440$ $l = \frac{16}{12} = 192$

$$\frac{135}{1440}$$

$$\frac{32}{16} = 192$$

$d = \frac{5 W l^3}{384 E I} = \frac{5 \times 1440 \times 192 \times 192 \times 192 \times 12}{384 \times 1.6 \times 4 \times 8 \times 8 \times 8} = .486" O.K.$

$\frac{7000 \times 200 \times 200 \times 200 \times 10}{400 \times 1.6 \times 4 \times 4 \times 30 \times 70} = \frac{560}{1280} = \frac{1}{2}$

$d = \frac{5 W l^3}{32 E b h^3} = \frac{5 \times 1440 \times 192 \times 192 \times 192}{32 \times 1.6 \times 1.625 \times 2 \times 7.5 \times 7.5 \times 7.5} = .725"$
too much

Use 2-2" x 10" S. 4S or rough.

Beams over Den ... Span 16'-0"

Load - live 40[#]
Flooring 3[#]
Joists 3[#]
Total 46[#]

Spacing 4'-0"

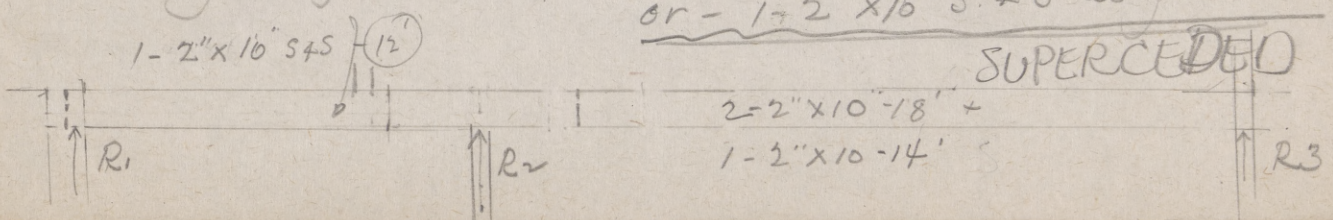
$W = 46 \times 4 \times 16 = 2944$

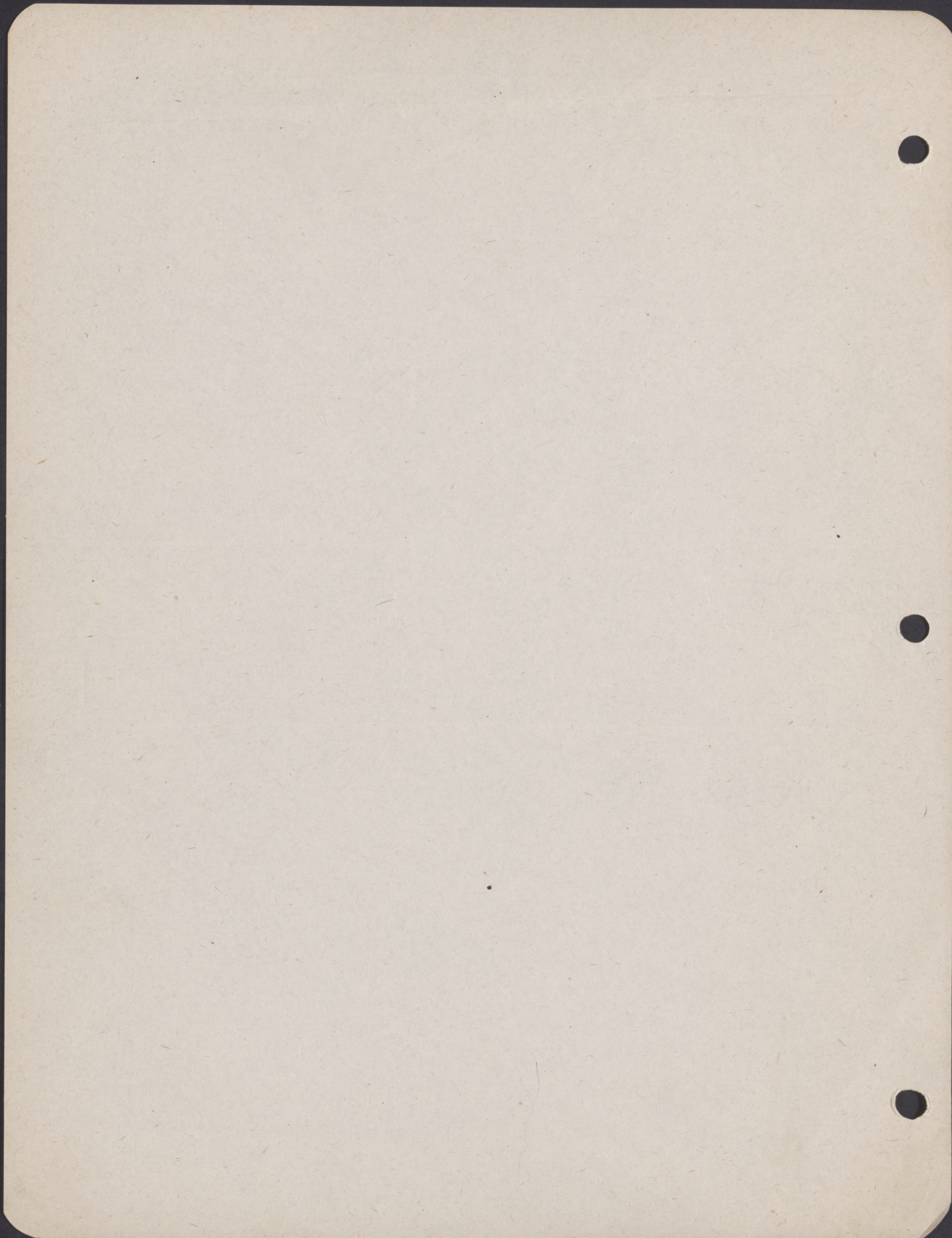
1-2x10 good for 1150[#] Use 3-2"x10" S4S - 4'-0" o.c.

Beams over Reception Room Span 9'-0"

$W = 46 \times 4 \times 8 = 1472$

1-2"x6" good for 762[#] Use 2-2"x6" S4S - 4'-0" o.c.
or - 1-2"x10" S. 4S as follows





House P.W. Den Addition

2-23-47

Joists over Basement - Span 18'-0" - Spacing 2'-0"

$$\begin{array}{r}
 \text{Load live } 40 \# \\
 \text{Flooring } 3 \# \\
 \text{Insulation } 1 \# \\
 \text{Total load} = 44 \# \\
 \text{Use } 3" \times 10" - 24" \text{ o.c. } W = 1755 \\
 \text{or } 2" \times 12" - 24" \text{ o.c. } W = 1592 - \text{Cheapest}
 \end{array}$$

Hard to get.

Joists over Den and Rec. Hall Span 4'-0" - Spacing 2'-0"

$$\text{Load} = 2 \times 4 \times 46 \# = 368 \# - \text{Use } 2" \times 3" - 54S - 2'-0" \text{ o.c.}$$

See Computations below (NOT USED)

Girders over Basement under Partitions - Span 15'-6"

$$\begin{array}{r}
 \text{Load from Second Floor } 12' \times 15' \times 46 \# = 8300 \# \\
 \text{Partition } - 20' \times 10' \times 15' = 3000 \# \\
 W = 11300 \#
 \end{array}$$

$$1 - 2" \times 12" \text{ S4S } \text{ Good for } 1791 \times \frac{16^2}{155} = 1910 \# \quad \frac{11300}{1910} = 6 \text{ joists } W \text{ on Post} =$$

Use 6-2" x 12" or steel beam. Bearing top of Post = $\frac{11300}{6} = 1883 \#$

$$\text{Try junk yard } - S = \frac{W}{f} = \frac{11300}{8 \times 20000} = 13.1 \text{ } 4 \times 6 \text{ O.K.}$$

$$M(\text{Conc}) = \frac{11300 \times 16 \times 25 \times 12}{8} = 276000 \# \text{ f}$$

$$\frac{16000 \times 20 \times 16}{10}$$

$$8" \text{ I } 18.4 \# \quad S = 14.22 - 11000 \#$$

$$8" \text{ B } 17.5 \# \quad S = 14.43 - 11000 \#$$

$$10" \text{ B.J } 16.5 \# \quad S = 16.5 - 12000 \#$$

$$8" \text{ B.J } 14.5 \# \quad S = 11.23$$

$$\frac{12000 \times 200}{16000} \text{ Reduce } W \text{ by } 20\% = 9040 \#$$

$$11300 \times .8 = 9040 \#$$

$$\text{Could use } 8 \times 12 = 8266 - 16 \#$$

$$\text{Reduce load on Girder } - 17\% = 5 \text{ joist } 2" \times 12" \text{ or } 10" \times 12" - 11168$$

$$\text{Reduce load on steel} = 9040 \# \quad M = \frac{9040 \times 15.5 \times 12}{8 \times 20000} = 10.5 = S$$

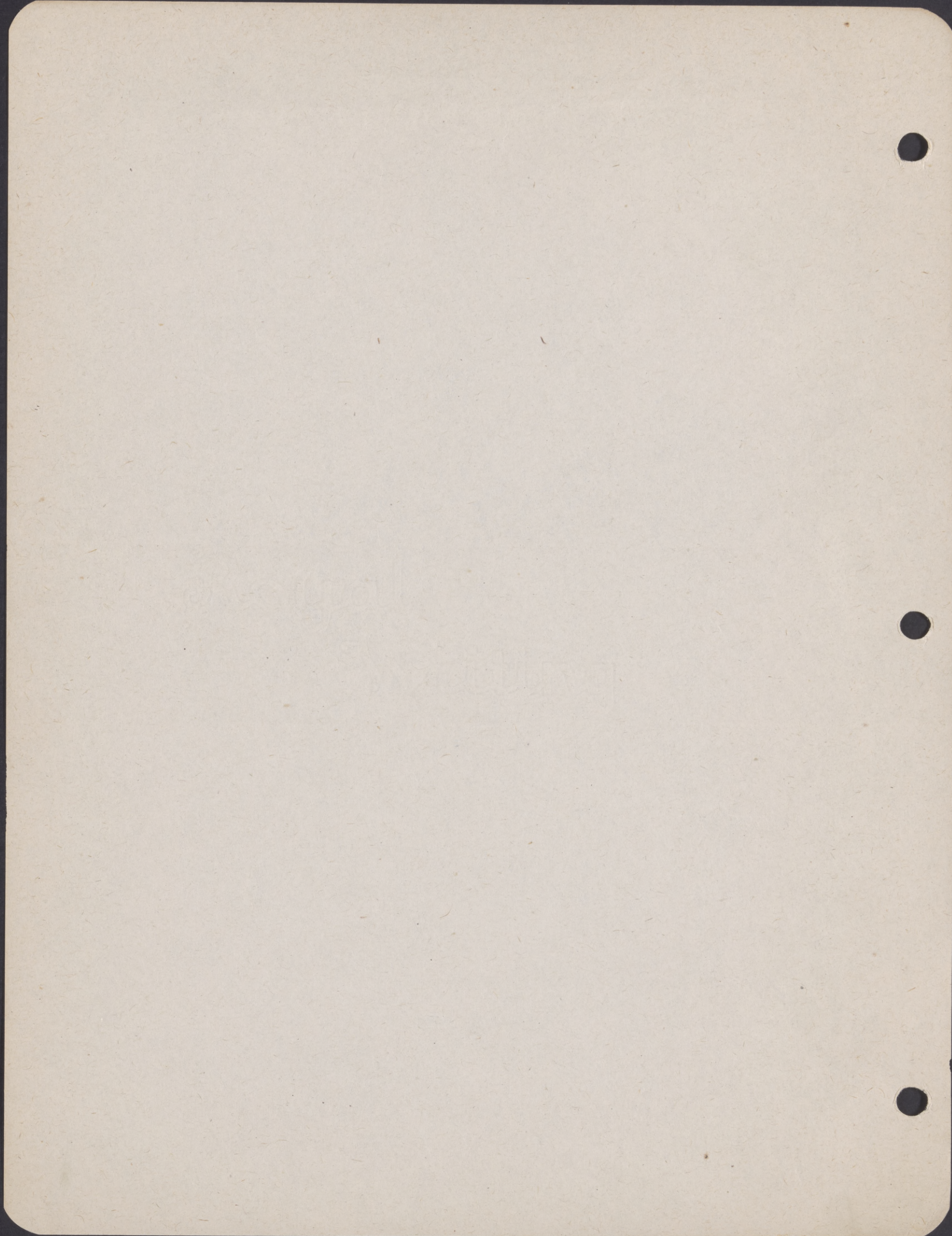
$$8" \text{ B.J } 14.5 \quad S = 11.23 \#$$

Wood @ .09 per lb -

$$\text{Steel @ .05 per lb} = 14.5 \# \times 16' \times .05 = 11.60$$

$$= 10' \times 16' = 160' \times .09 = 14.40$$

$$27600$$



House P.W.
Den Addition Engineering.

Joists over Basement - Span 15.5' 46 - Spacing 2'-0"

Load - 46 # $W = 46 \# \times 2 \times 15.5 = 1426 \#$

Use 2" x 12 - good for 1791 +

NOT USED

Order under Basement - Span 12'-0"

Load from Second Floor $12' \times 12' \times 46 \# = 6620$

Partition $20' \times 10' \times 12 = \frac{2400}{9020} = W.$

$S = \frac{M}{f} = \frac{9020 \times 12 \times 12}{8 \times 20000} \quad 8.12 = S$

Joist near Spiral Stair column.

Load Live 40 # Area $\pi \times 2.17' \times 45' = 665 \#$

Floor 3 #
Iron WK 2 #
45 #

Shear = 665 # = V

$v = \frac{665}{1.625 \times 12} = 34$

O.K. 90 # Allowed on 1200 # D.F.

NOT USED

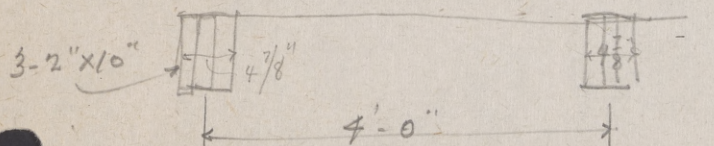
Joint? Nails

Joists over Den and Rec Hall - Span 4'-0" - Spacing 2'-0"

Load $2' \times 4' \times 46 \# = 368 \#$ - Joist continuous over 3 spans.

$\frac{M}{f} = \frac{W \cdot L}{10 \times 1200} = S = \frac{368 \times 4 \times 12}{10 \times 1200} \quad 1.472 = S$

$3 \times 2 \text{ S4S } S = \frac{bh^2}{6} = \frac{2.625 \times 1.625 \times 1.625}{6} = 1.15$ - Not enough.

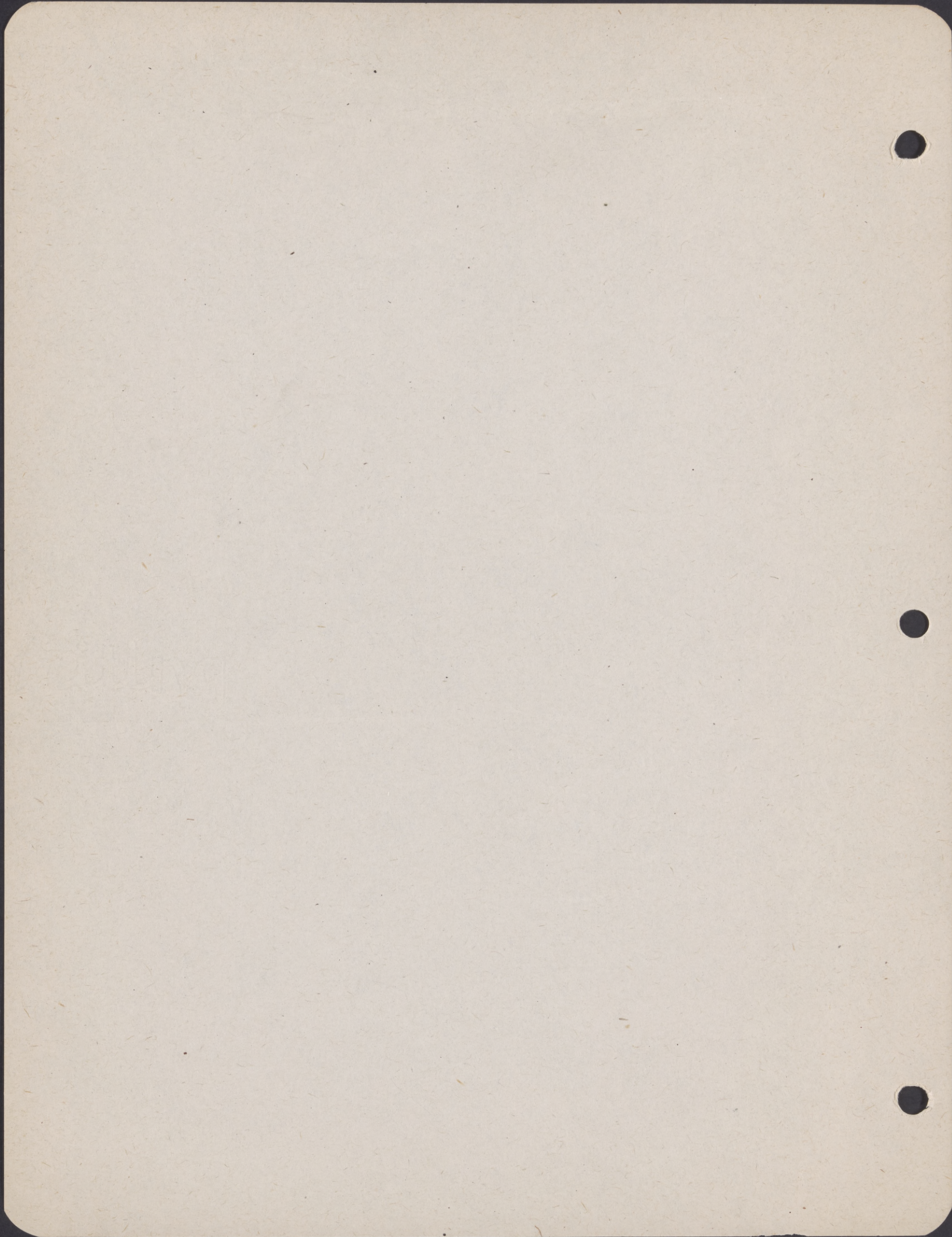


Clear span = 4'-0" - 5" = 3'-7" + 2" = 3'-9" for M

$\frac{M}{f} = \frac{W \cdot L}{11 \times 1200} = \frac{368 \times 3.75 \times 12}{11 \times 1200} = 1.25$

Same span and load for roof
perkins $S = 1.25$
Use 2" x 3" - 24" o.c. $S = 1.87$

(average) Try 4" x 2" S4S - $S = \frac{bh^2}{6} = \frac{3.625 \times 1.625 \times 1.625}{6} = 1.592$ O.K.
Use 4" x 2" S4S (flatwise) 2'-0" o.c.



Concrete Beam under partition
Hance P.W. Den Addition -

3-9-47

$$M = 276,000 \text{ in}^{\#} \quad R = 131 \quad f_s = 20,000 \text{ psi}$$

$$K = 0.375 \quad j = 0.875 \quad \text{try } b = 18"$$

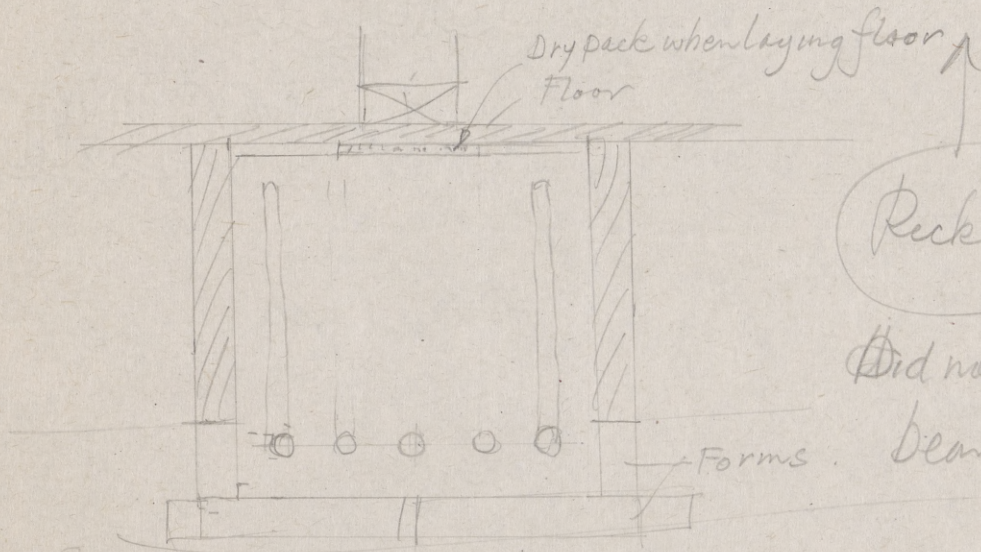
$$d = \sqrt{\frac{M}{Rb}} = \sqrt{\frac{276,000}{131 \times 16}} = \sqrt{13.15} = d = 11"$$

$$\frac{300,000}{100 \times 20}$$

$$\sqrt{\frac{276,000}{131 \times 14}} = \sqrt{1.52} = 12\frac{1}{2}"$$

$$A_s = \frac{M}{f_s j d} = \frac{276,000}{20,000 \times 0.875 \times 12} = 1.315 \text{ in}^2 = 3 - 3/4 \phi -$$

2-straight 1 Bent up.
Use b about 15" - $d = 12"$ $D = 14"$ or $5 - 5/8 \phi$



Recheck

Did not add weight of beam to M

$$\text{Beam} = 12 \times 15 = 180 \text{ in}^2 \quad 180 \times 15.5 = 2785 \text{ in}^{\#}$$

$$M = \frac{Wl^2}{8} = \frac{14100 \times 16.5 \times 12}{8} = 350,000 \text{ in}^{\#}$$

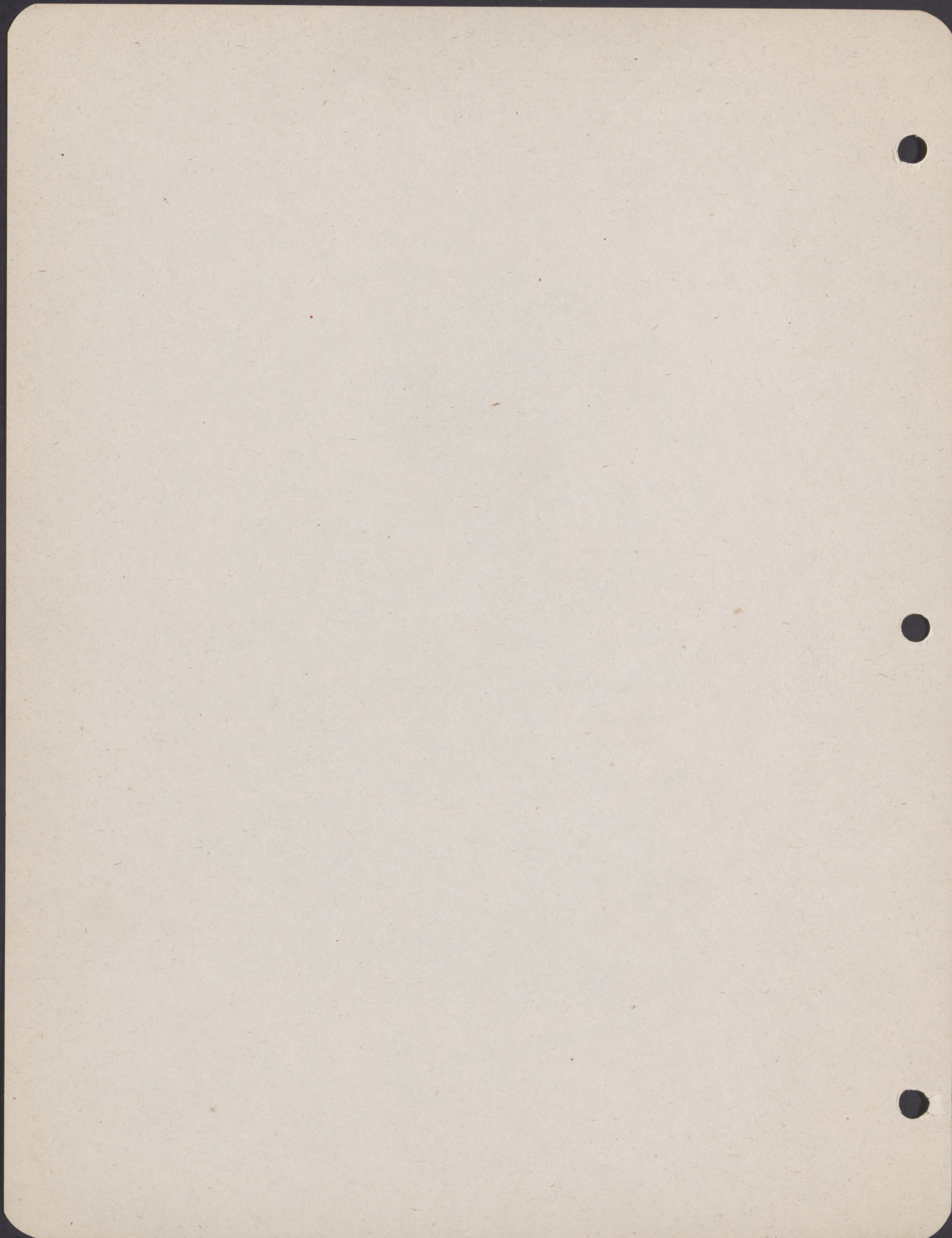
$$\frac{11300}{12785} \quad \text{Use } 14 \text{ in}^{\#}$$

$$\frac{15000 \times 20 \times 10}{10}$$

$$d = \sqrt{\frac{M}{Rb}} = \sqrt{\frac{350,000}{131 \times 16}} = \sqrt{166.6} = 13"$$

Assume $b = 16"$ Superceded
Assume $b = 18"$

$$d \sqrt{\frac{M}{Rb}} = \sqrt{\frac{350,000}{131 \times 18}} = \sqrt{148.5} \quad d = 12\frac{1}{4}" \text{ OK.}$$



House P.W. Den Addition

3-10-47

Ceiling joists over Reception Hall - Span 8'-6" - Spacing 2.67'

$$\begin{array}{r} \text{Load - Live - } 30 \# \\ \text{Shiplap - } 3 \# \\ \text{Beams - } 1 \# \\ \hline 34 \# \end{array}$$

$$\frac{M}{f} = \frac{34 \# \times 2.67 \times 8 \times 8.5 \times 12}{1200 \times 8} = 7.7$$

Use 4" x 4" - 2'-8" ± o.c.

30 x 3 x 10

$$W = 34 \times 2.67 \times 8 = 725 \#$$

Girder at N.W. Cor. of BedRm - Span 8'-0"

Load 46 # # Area = 12' x 8'

$$W = 46 \# \times 12 \times 8 = 4416 \#$$

$$S = \frac{M}{f} = \frac{4416 \times 8 \times 12}{8 \times 1200} = 44.16$$

Use 6" x 8 - S = 51.56
or 3" x 8 S = 3 x 15.23 = 45.69

$$\text{Steel - } S = \frac{M}{f} = \frac{4416 \times 8 \times 12}{8 \times 20000} = 26.496$$

4" I 7.7 # S = 3.0

or 4" R.R. Rail

or 4" H 13.8 # S = 5.35 (too expensive)

or 5" L 6.7 # S = 2.96 (cheapest)

Bearing - Too small 1.75"

or 6" L 8.2 # S = 4.33

? Junior Beams for all joists in basement - Span 18'-0"

$$S = \frac{M}{f} = \frac{1764 \times 18 \times 12}{8 \times 20000} = 2.38$$

W = 1764

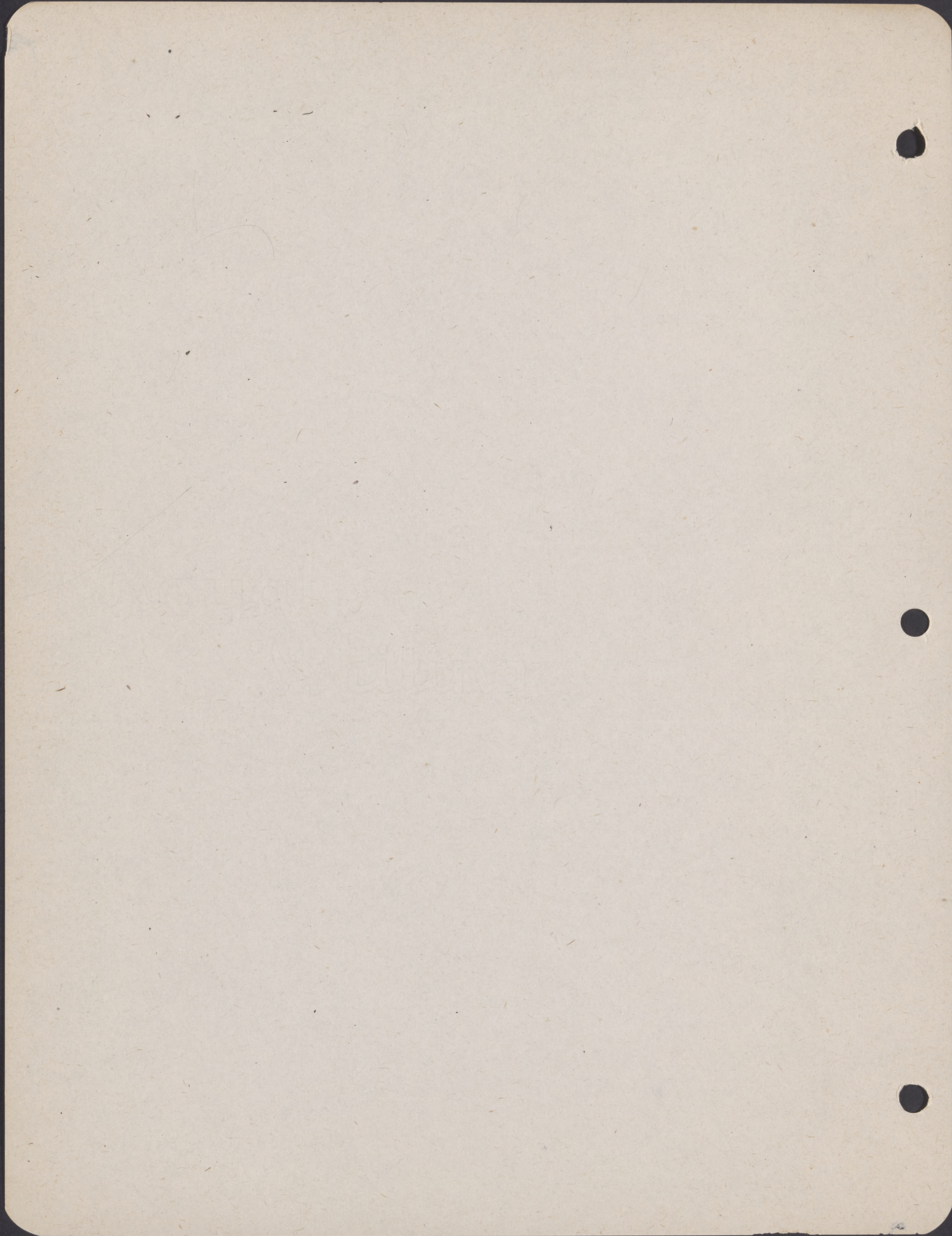
6" JB 4.41 # S = 2.42

7" " 5.18 # S = 3.45

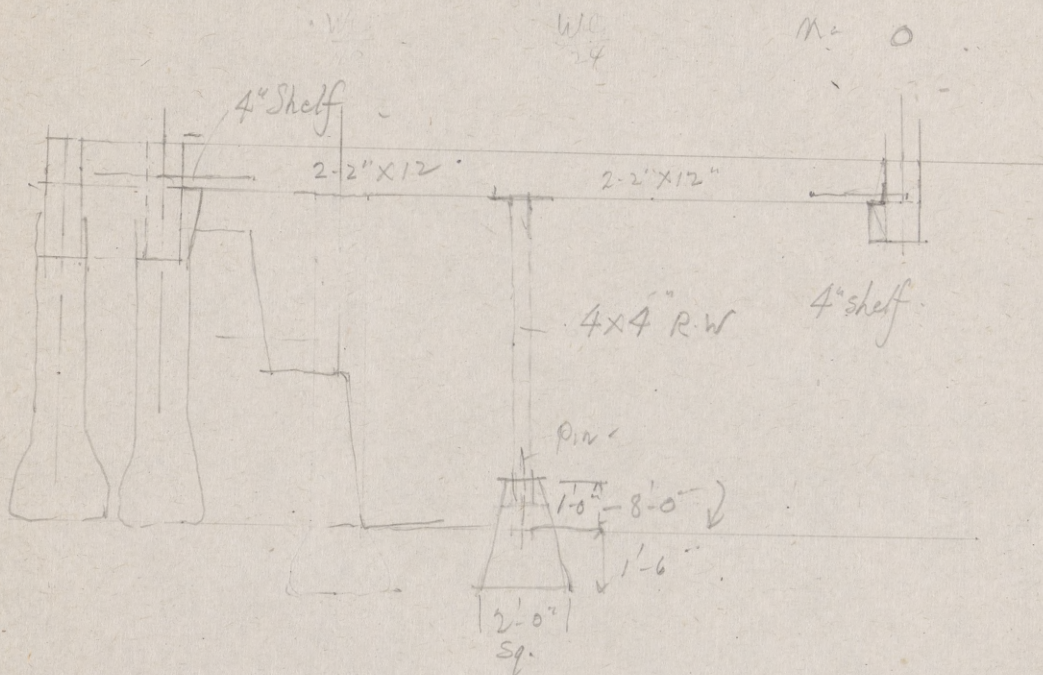
4.76

Steel @ 6¢ per lb - 1 joist = 18 x 4.41 x .06 =

Wood @ 9¢ " 2" x 12" x 18 = 36' BM x 9 = \$3.24 - Wood is cheapest.



House P.W. Den Addition - 3-18-47
 Beam under Rec Hall-Den Partition



Post in center is cheapest.

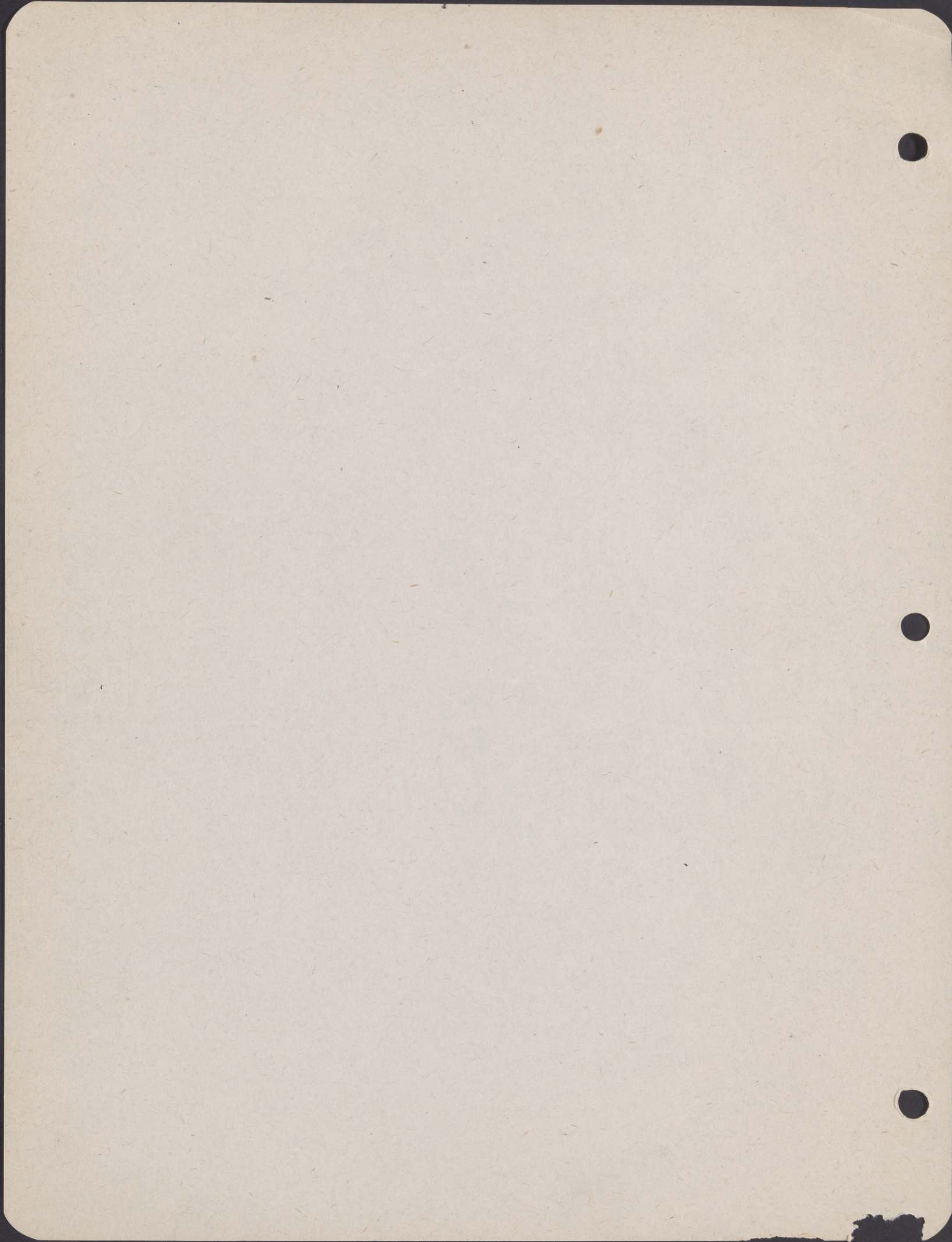
$$W \text{ on Post} = \frac{W \cdot L}{2} = \frac{11300 \#}{2} = 5650 \# @ 1500 \# = 3.8'$$

$$3.8 \times 144 = 543. \quad \sqrt{543} = 23" \quad \text{Use } 2'-0" \times 2'-0"$$

$$M - \text{Beam} = \frac{W \cdot L}{8} = \frac{5650 \times 8 \times 12}{8 \times 100} = 56.50 \quad \begin{array}{l} 1 - 2" \times 12 = 35.82 \\ 2 - 2" \times 12 = 71.64 \end{array}$$

Use 2-2" X 12

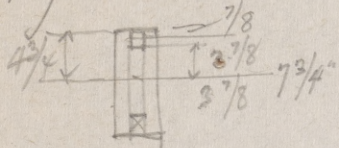
~~Superceded~~



Rafters over Bedroom

3-27-47

Try 2-2"x10" + 2-2"x2" d = 9 1/2"



$$I \text{ 2"x10" } = 116.1$$

$$+ 116.1$$

$$\hline 232.2$$

$$I \text{ 2"x2" (1 5/8" x 1 5/8")}$$

$$bd^3 + Ah^2$$

$$\frac{1.625 \times 1.75 \times 1.75 \times 1.75}{12} +$$

$$1.625 \times 1.75 \times 3.875 \times 3.875$$

$$\frac{25.6 + 42.6}{2} = 34.1$$

$$S = \frac{I}{C}$$

$$I \text{ 2"x10" } = 116.1$$

$$\hline 232.2$$

$$I = \frac{1.625 \times 7.75 \times 7.75 \times 7.75}{12} = 63$$

$$\frac{232.2 + 63}{2} = 147.6$$

$$\frac{116.1 + 116.1}{2} = 116.1$$

$$S = \frac{I}{C} = \frac{280}{4.75} = 59$$

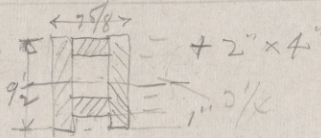
$$W = 3280$$

$$S = \frac{W \times L}{8 \times 100} = \frac{3280 \times 18 \times 12}{8 \times 100} = 72.36$$

S required = 72.36 S furnished = 59 - not enough

Use 2-2"x12" S = 73.8

Try 2-2"x10" Rough



$$I = 535.8 - 193.35$$

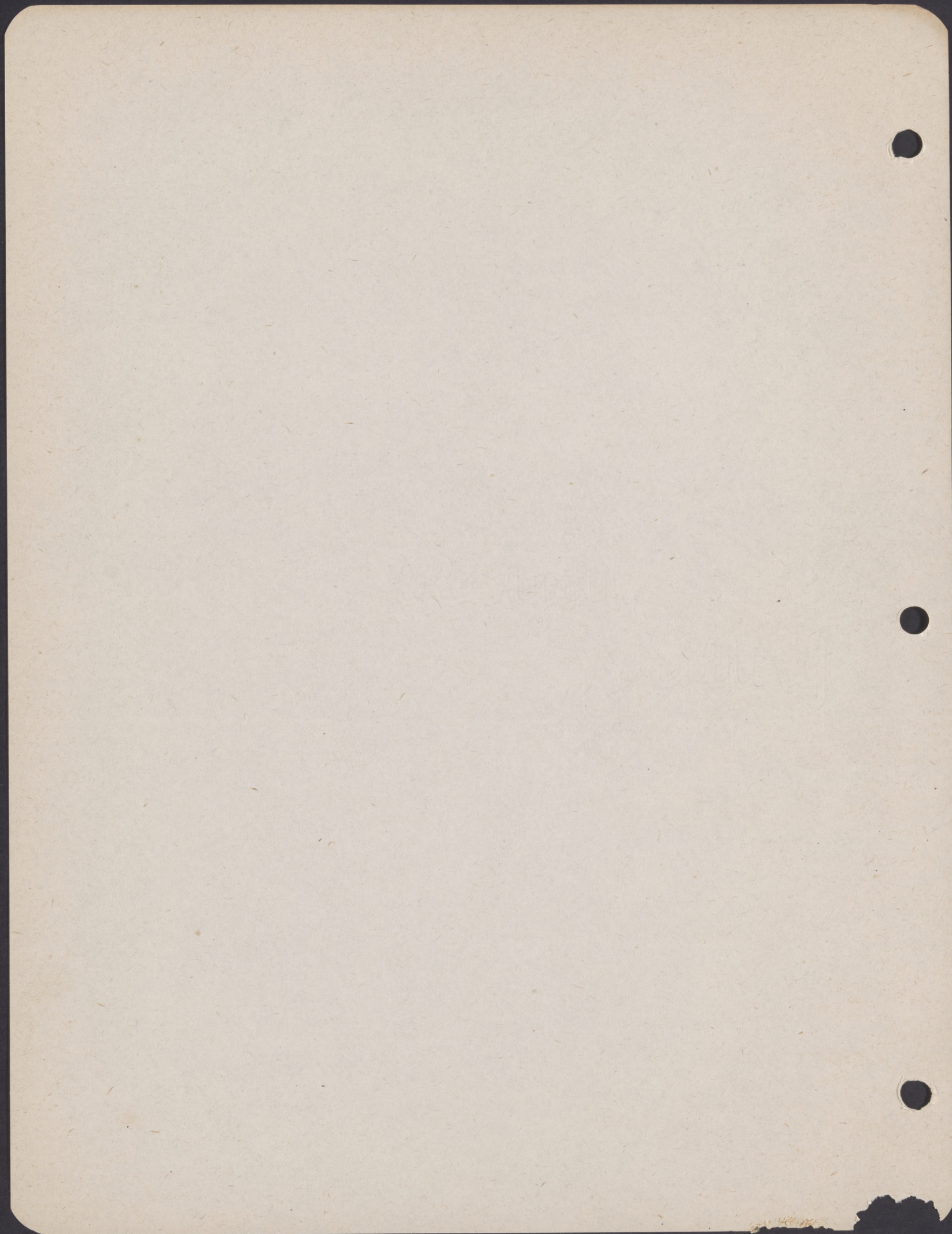
$$\hline 342.45$$

$$S = \frac{I}{C} = \frac{342.45}{4.75} = 72$$

$$W = 3280$$

$$S \text{ required } 72.36$$

$$S = 72 - \text{OK}$$



House P.W

May 14. 1947

Concrete for foundation -

$$14 \times 0.67 \times 2'-0" = 18.75 \text{ cuft.}$$

$$\text{Famed } 24 \times 0.67 \times 1.2 = 19.3 \text{ " "}$$

$$40 \times 0.67 \times 1.7 = 45.5 \text{ " "}$$

$$22 \times 0.67 \times 1.5 = 22.0 \text{ " "}$$

$$\text{Piers } 1 \times 7 \times 12 = 84$$

$$1 \times 3 \times 2 = 6$$

$$1 \times 5 \times 1 = 5$$

$$27 \overline{) 200.55} \text{ cuft.}$$

7.42 yards.

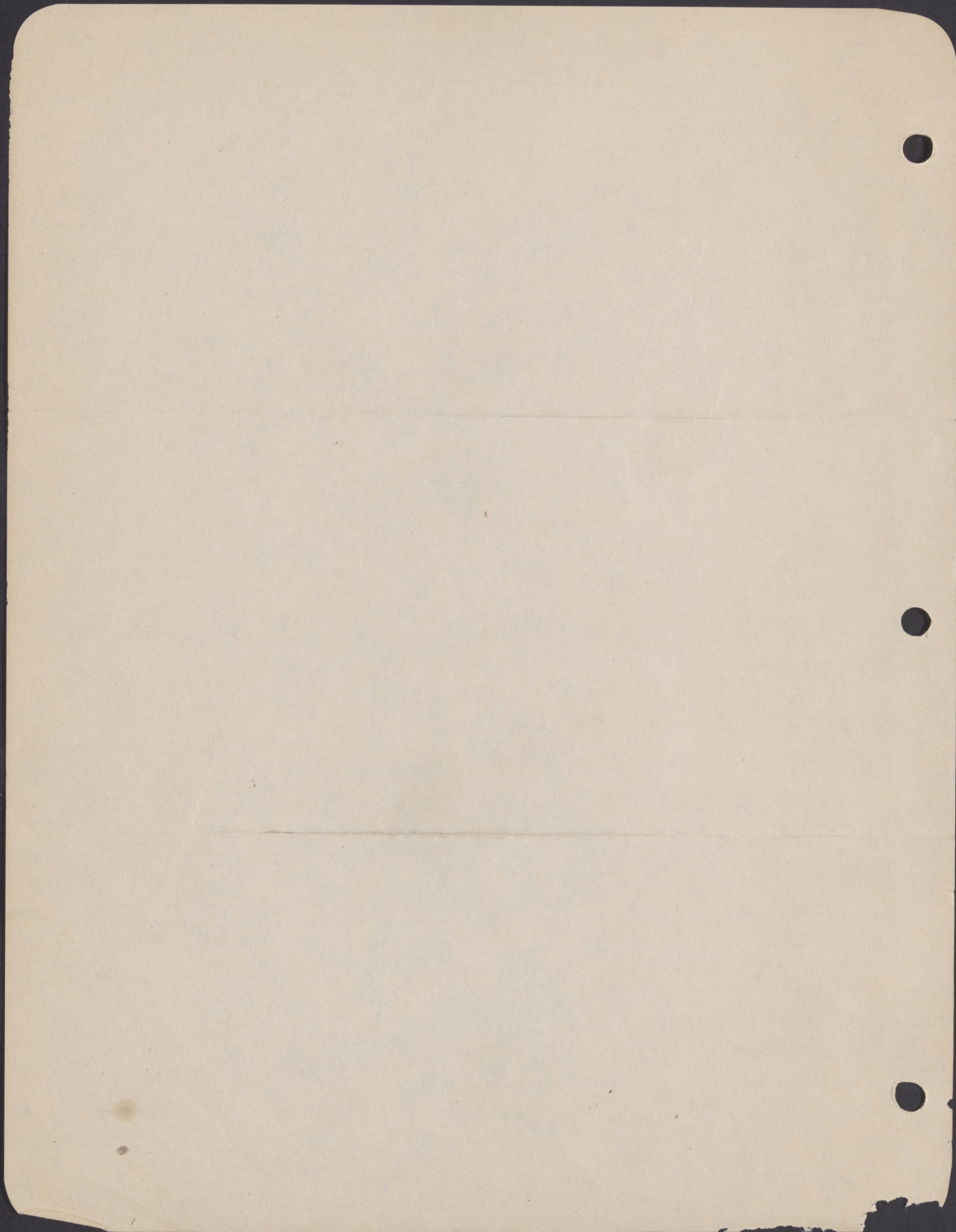
$$\begin{array}{r} 27 \overline{) 95.00} \quad (3.52 \text{ cu yds} \\ \underline{81} \quad \quad \quad 5 \text{ sacks per yd} \\ 140 \quad \quad \quad 17.60 \\ \underline{135} \quad \quad \quad \\ 50 \quad \quad \quad 20 \text{ sacks 1st pour} \end{array}$$

for 20 sacks we need -

$$4 \times 13.50 = 54.00 \text{ # sand}$$

$$4 \times 19.15 = 76.60 \text{ # gravel.}$$

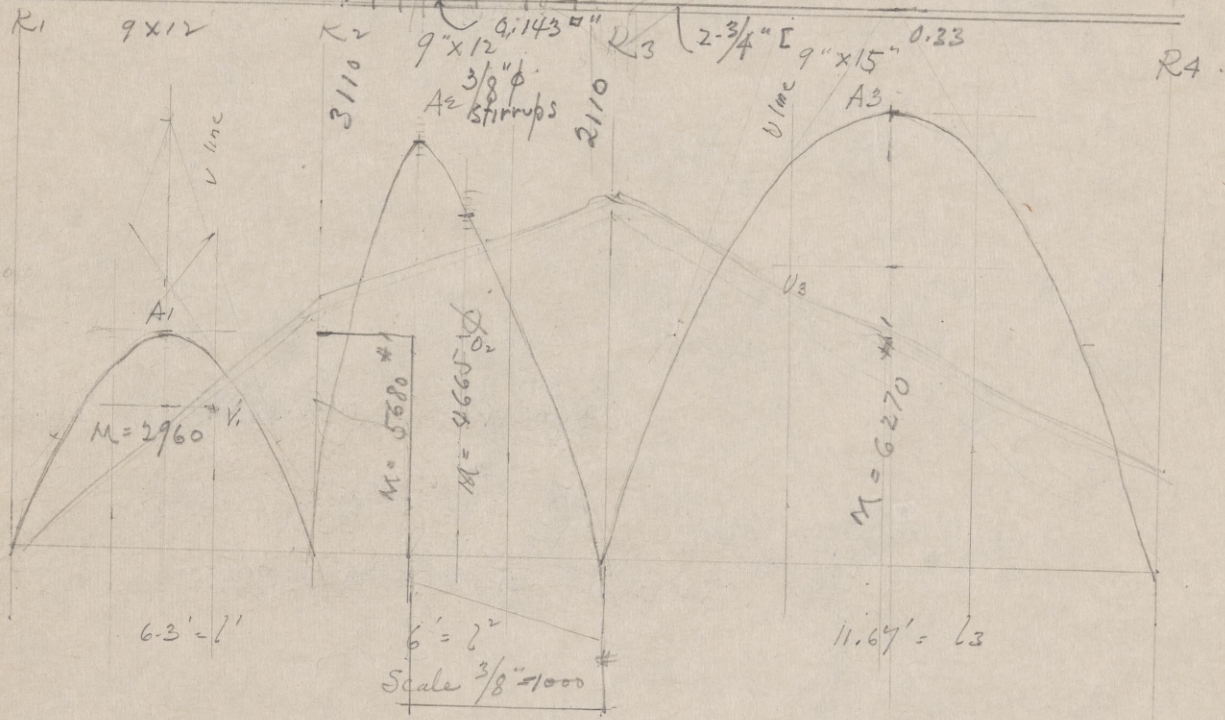
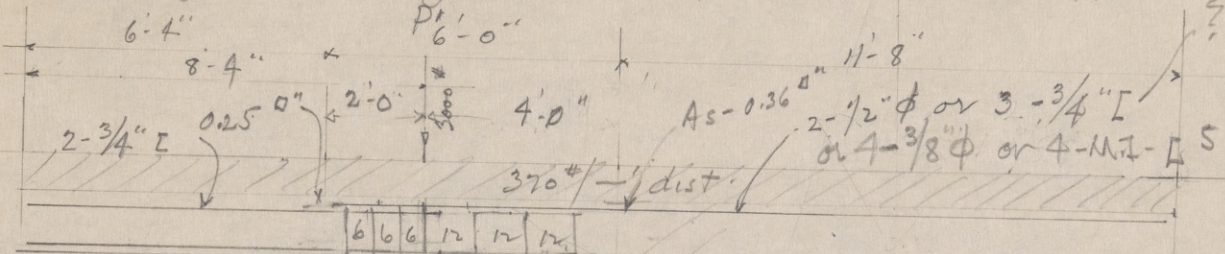
5.10 cuft concrete
per sack of cement.



Basement Beam along S. wall.
Solve by Nishkarn Diagram.

May. 19. 1947
P. W. House Den Addition

2-5
1-2



$$A_1 = \frac{2}{3} l_1 = \frac{2 \times 6.3 \times 2960}{3} = 12430$$

A2

$$A_3 = \frac{2}{3} l_3 = \frac{2 \times 11.67 \times 6270}{3} = 48650$$

Wt on Ent Hall Partition joint = 11300 #

$$\frac{11300}{4} = 2825 \text{ #} - \text{Say } 3000 \text{ #}$$

$$\text{Dist Load} = 46 \text{ #/ft} \times 8' = 368 \text{ #} - \text{Use } 370 \text{ #}$$

$$M - R_1 - R_2 = \frac{370 \times 8 \times 8}{8} = 2960$$

$$+ R_2 = \frac{370 \times 6 \times 3}{6} + 3000 \times 4 = 6660 + 12000 = 18660 = 3110$$

Approximations.

$$M \text{ at } l_3 = \frac{W l^2}{12} = \frac{6270 \times 8}{12} = 4200 \text{ #}$$

$$M \text{ at } R_3 = \frac{W l^2}{10} = \frac{6270 \times 8}{10} = 5000 \text{ #}$$

$$M \text{ at } R_4 = \frac{W l^2}{20} = 2500 \text{ #}$$

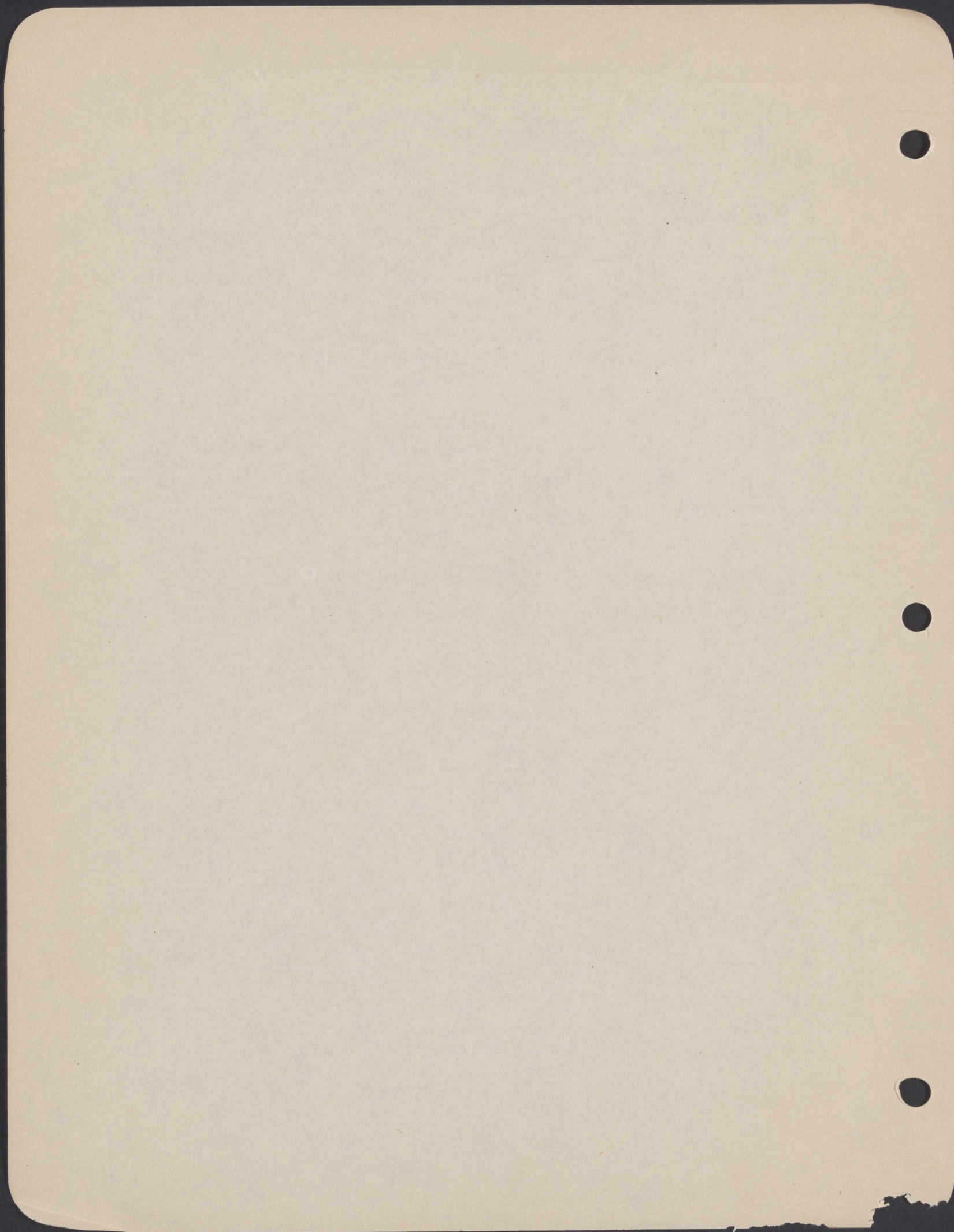
$$M \text{ at } R_2 = 3500 \text{ #}$$

$$M \text{ at } l^2 = 2000 \text{ #}$$

$$\text{Shear at } l^2 \text{ from } R_2 \text{ to } P_1 = 3110 \text{ #}$$

$$\begin{array}{r} 370 \\ 18 \\ \hline 2960 \\ 370 \\ \hline 6660 \end{array}$$

$$\begin{array}{r} 4.08 \\ 12.24 \\ \hline 4220 \\ 3600 \\ \hline 7820 \\ 3110 \\ \hline 1110 \end{array}$$



May 19. 1947

House P. W. Den Addition.
Basement Beam along S. Wall - Cont'd

(2)

M - R₂-R₃ under conc. load.

$$= 3110 \times 2 - 270 \times 2 \times 1$$

$$6220 - 540$$

$$\underline{5680} \#'$$

M - R₂-R₃ at ϕ =

$$3110 \times 3 - 3000 \times 1 - 370 \times 3 \times 1.5$$

$$9330 - 3000 - 1665$$

$$\underline{4665}$$

$$= 4665$$

$$\begin{array}{r} 370 \\ 45 \\ \hline 1850 \\ 1880 \\ \hline 1665.0 \end{array}$$

$$M-R_3-R_4 = \frac{370 \times 11.67 \times 11.67}{8} = 6270$$

For 2000 # Concrete $f_c = 650$ # $f_s = 16000$ #

$$K = 108 \quad k = 0.379 \quad j = 0.874 \quad \phi = 0.077$$

$$d = 12" \text{ at } l_3 \quad R_M = 15.600 \#$$

$$M-l_3 = 5000 \#$$

$$\frac{M}{K} = A_s = \frac{M}{f_s j d} = \frac{5000 \times 12}{16000 \times 0.874 \times 12} = .3575 \#$$

4 - 3/4" M.I. Channels
2 - 1/2" ϕ bars As furnished = .39

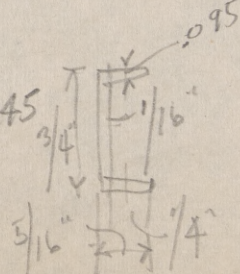
$$A_s - R_2 = \frac{3500 \times 12}{16000 \times 0.874 \times 12} = 0.25 \# = 3 - 3/8" \phi$$

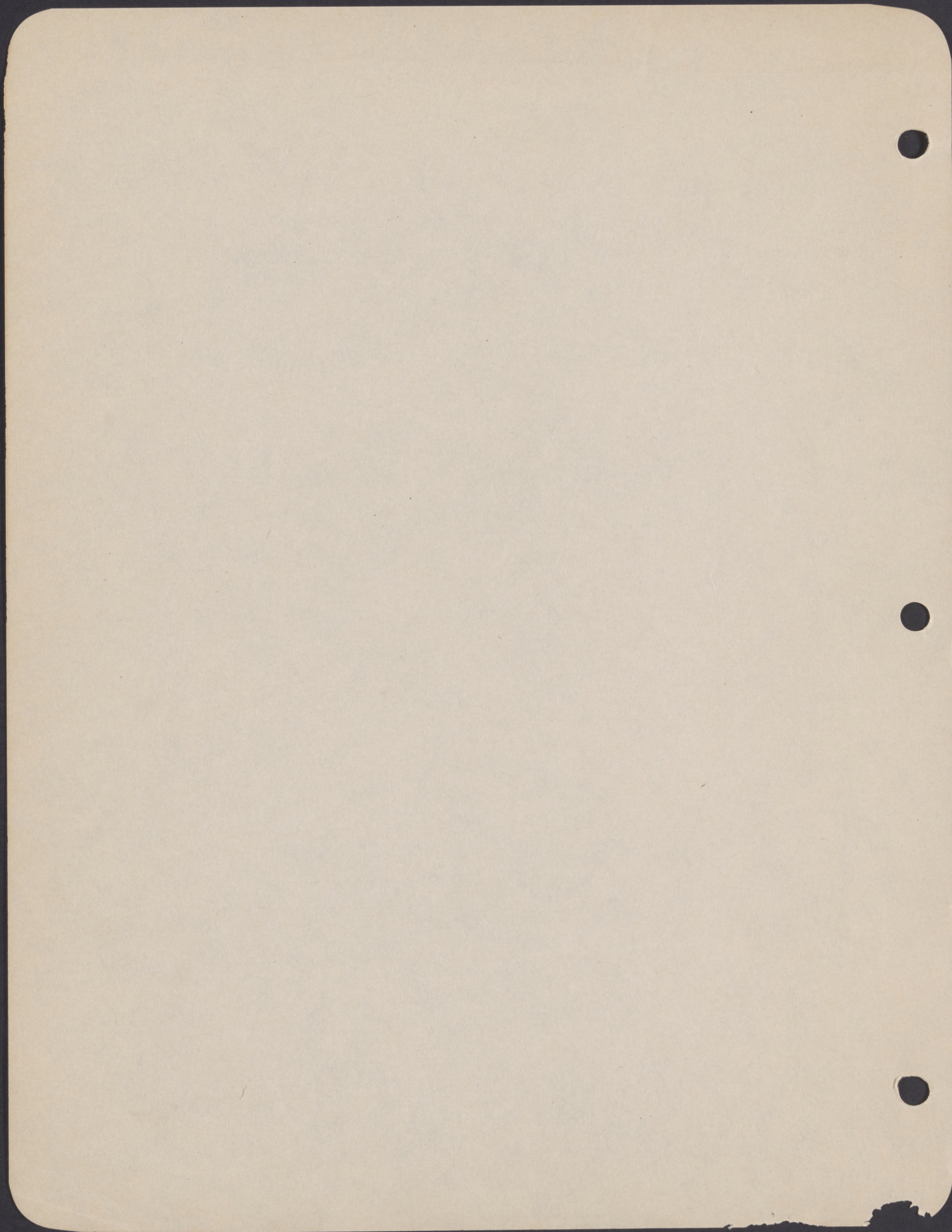
$$Wt \text{ of } 3/4" \text{ I} = 0.56 \#$$

$$\text{Area of } 3/4" \text{ I} = \frac{0.56 \#}{3.4 \#/\text{ft}} = .165 \text{ ft}^2$$

$$\text{Area of } 5/16 \times 3/4" \text{ I. Mission Inn} = .0945$$

$$\frac{2000 \times 12}{16000 \times 0.874 \times 12} = 0.143 \#$$





House P.W. Den Addition -

5-25-47.

Joists under Reception Hall Span. 8'-6" - Load 46 #/ft'

$$\text{Area } 2 \times 8.5 = 17.0'$$

$$M = \frac{wL^2}{8} = \frac{46 \# \times 17 \times 8.5 \times 12}{8} = \frac{9960 \#''}{1200} = 8.3''$$

$$\frac{50 \times 20 \times 10 \times 10}{10}$$

$$2" \times 6" \text{ S4S O.K. } - S = 8.57.$$

Girder Under Reception Hall. Span 8'-0" Load 46 #/ft'

+ Joists 2 #
+ Flooring 3 #
51 #/ft'

$$\text{Area } 7.7' \times 8$$

$$S = \frac{M}{f} = \frac{51 \# \times 7.7 \times 8 \times 8 \times 12}{1200 \times 8} = 31.4. \quad 5\frac{1}{2} \times 5\frac{1}{2} S = 27.73$$

Use 6" x 6" Rough - or S15.

Girder over Basement under Partitions.

9-1-47

Span 15'-0" - W = 11300 # dist.

$$1 - 2" \times 12 S = 35.82$$

$$S \frac{M}{f} = \frac{11300 \times 15 \times 12}{8 \times 1200} = 214.5 =$$

$$\text{Could use } 6 - 2" \times 12" = 6 \times 1\frac{5}{8} = 9.75"$$

$$M = \frac{11300 \times 15 \times 12}{8} = 254,800 \#'' \quad 4 \times 1\frac{5}{8} = \frac{6\frac{1}{2}''}{25} = 0.26"$$

$$\frac{20000 \times 10 \times 10}{10}$$

Try Built up beams. E for timber = 1,200,000
E for steel = 30,000,000

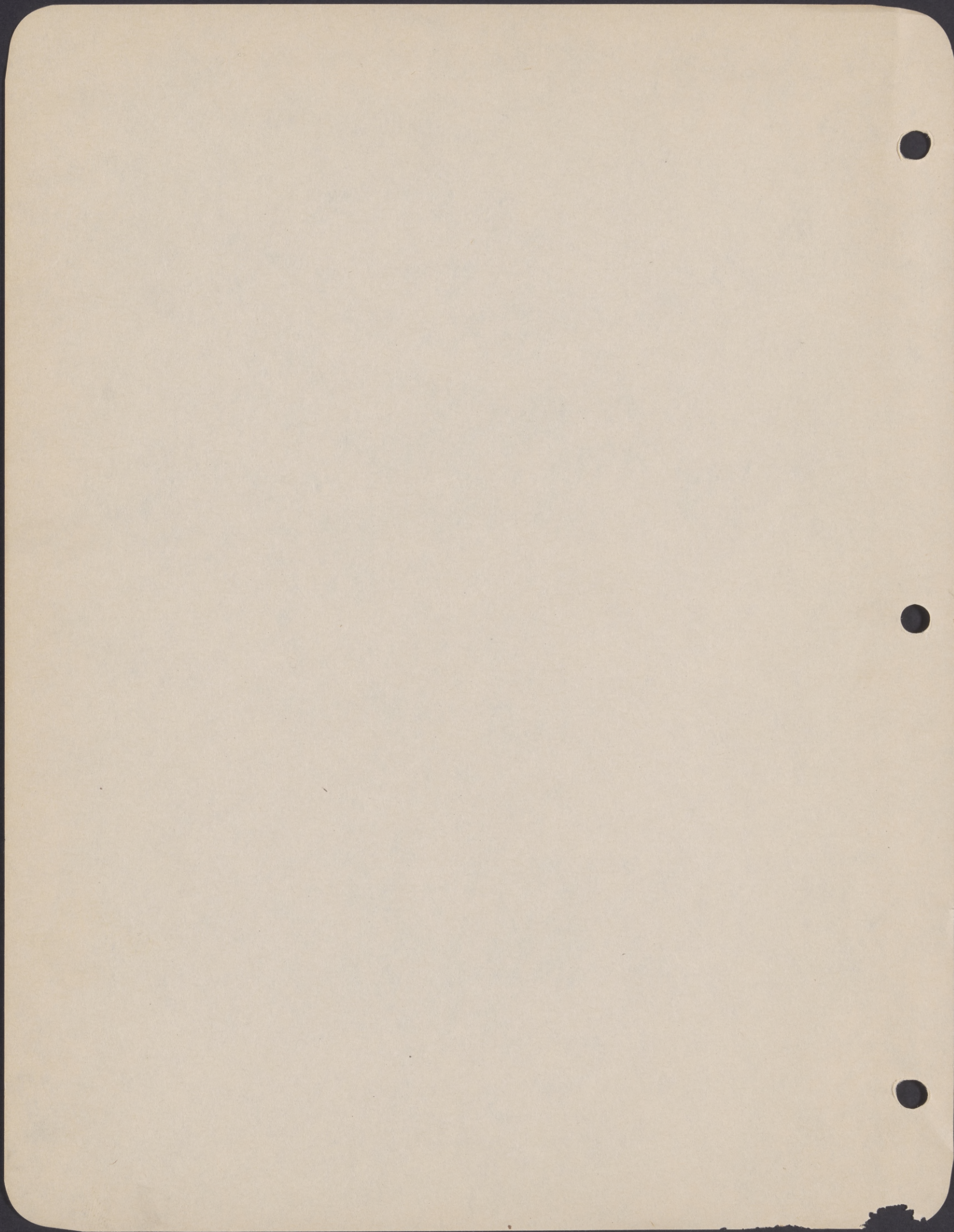
$$\frac{30.}{12.} = 25 = n.$$

2-2" x 12" + 1-1/4" x 12" plate - or 1/4" x 11 1/2"

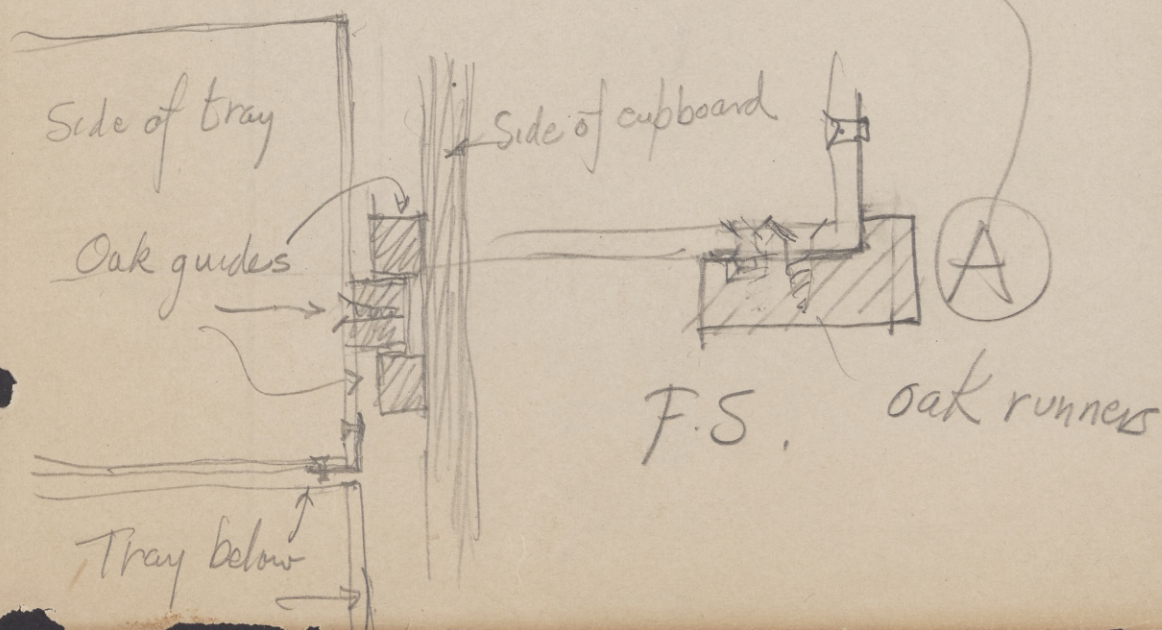
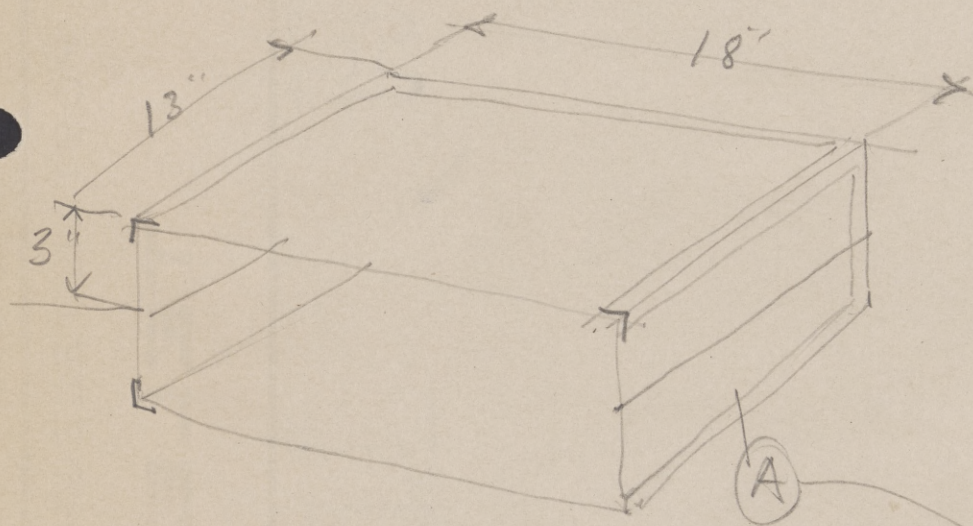
(Convert steel thickness to wood thickness by multiplying by n.)

$$\text{Shear} = \frac{11300}{2} = 5650 \# - \text{Use.}$$

$$\frac{M}{S} = \frac{254,800}{20,000} = 12.7400 - S = 12.74$$



House P. W. Den Addition 6-1-47
Trays made from - formica - ammunition boxes



COPY

CLASS OF SERVICE DESIRED

FAST TELEGRAM

DAY LETTER

NIGHT TELEGRAM

NIGHT LETTER

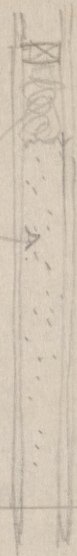
The sender must mark an X opposite the class of service desired; otherwise the telegram will be transmitted as a fast telegram.

POSTAL TELEGRAPH—CABLE CO.

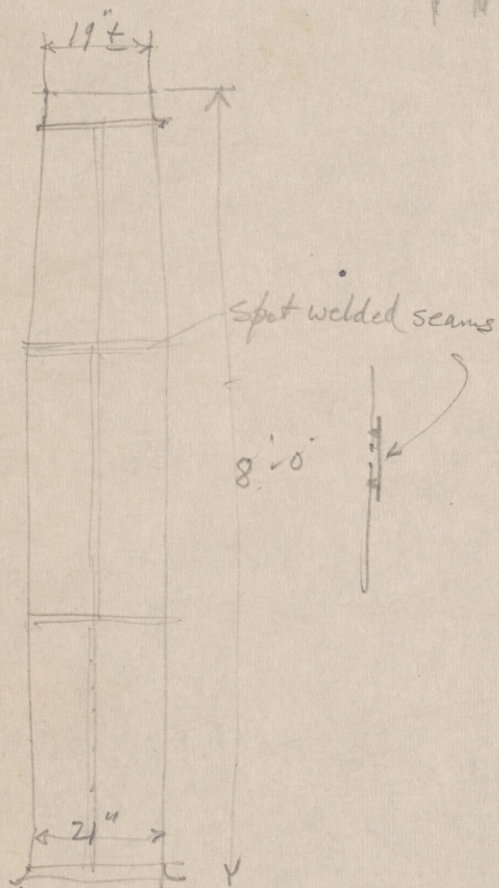
TELEGRAM

House P.W. - Den Addition 5-28-47.

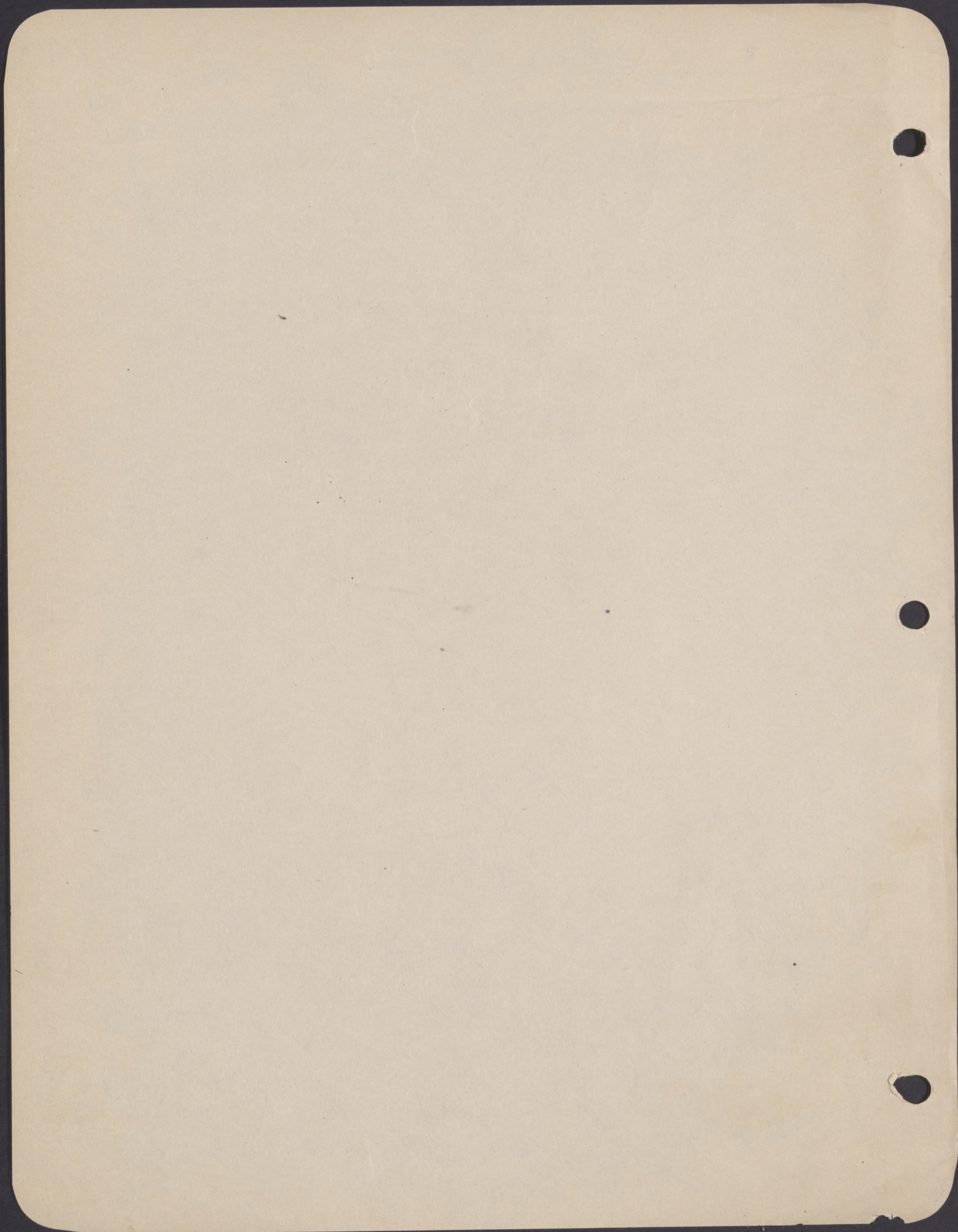
Idea - In wall
Use full insulation (old cork)
up to near top
and batt rock wool at top



10-11-47



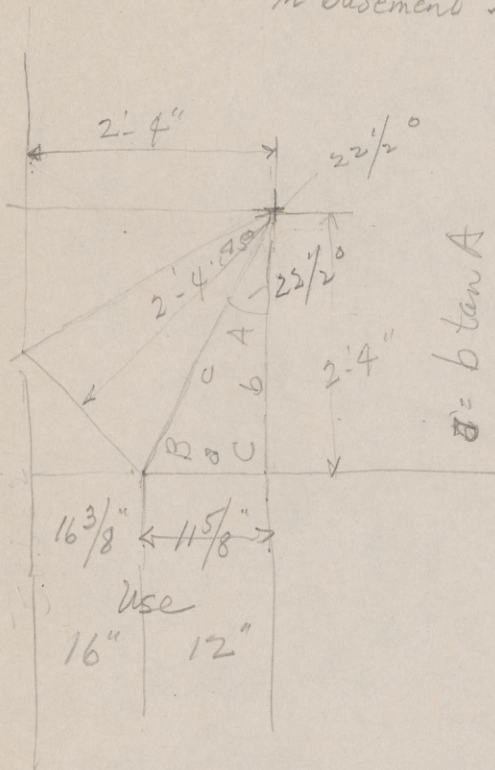
Stainless steel jet plane exhaust pipes
Wt about 30"



House P. W. Pen Addition

10-11-47

Bevel across N.E. Corner of spiral stairs
in basement.



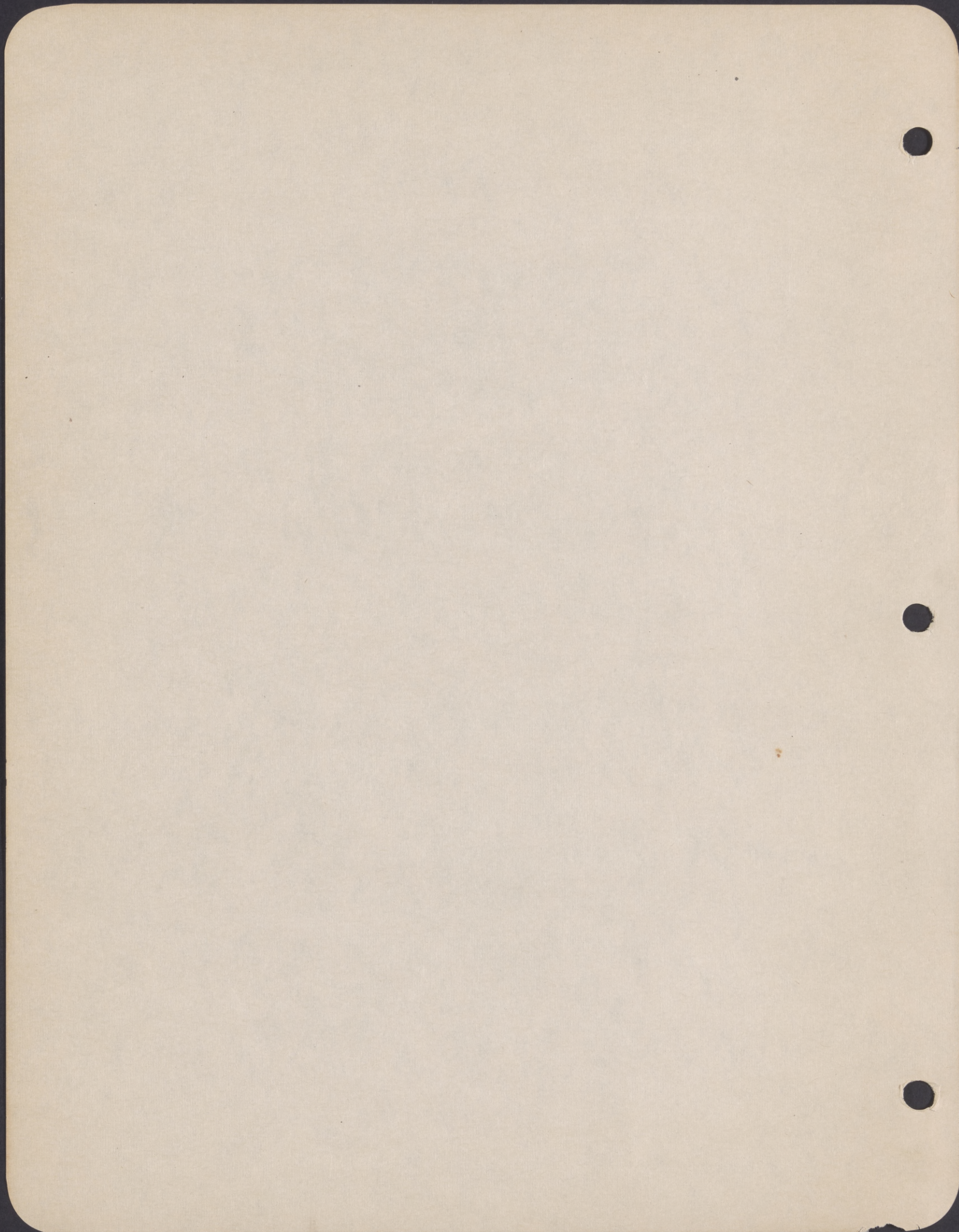
$$d = b \tan A$$

$$d = 28'' \times \tan 22^\circ - 30'$$

$$28 \times 0.41421$$

$$\begin{array}{r} 0.41421 \\ 28'' \\ \hline 331368 \\ 82842 \\ \hline 11.59788 \end{array}$$

$$\begin{array}{r} 28'' \\ 11.5/8'' \\ \hline 16.3/8'' \end{array}$$



House P. W. Dens Addition.

9.20.47

Crider over Basement under Partition.

Span 15'. W = 11300# dist.

$$S = \frac{M}{f} = \frac{W \cdot L}{8f} = \frac{11300 \times 15 \times 12}{8 \times 20000} = 12.7$$

$$\frac{10000 \times 20 \times 12}{160000}$$

2 - 6" x 2" x 3/16" L - $S = 2 \times 4.33 = 8.66$ - not enough -

10-27-47

Header at Stair Well.. Span 8'-0"

$$\frac{M}{f} = S = \frac{55 \times 6.25 \times 8 \times 8 \times 12}{8 \times 1200}$$

Load Live 40#
Floor 5#
Joists 2#
Plaster Ceiling 8#
Total load 55#

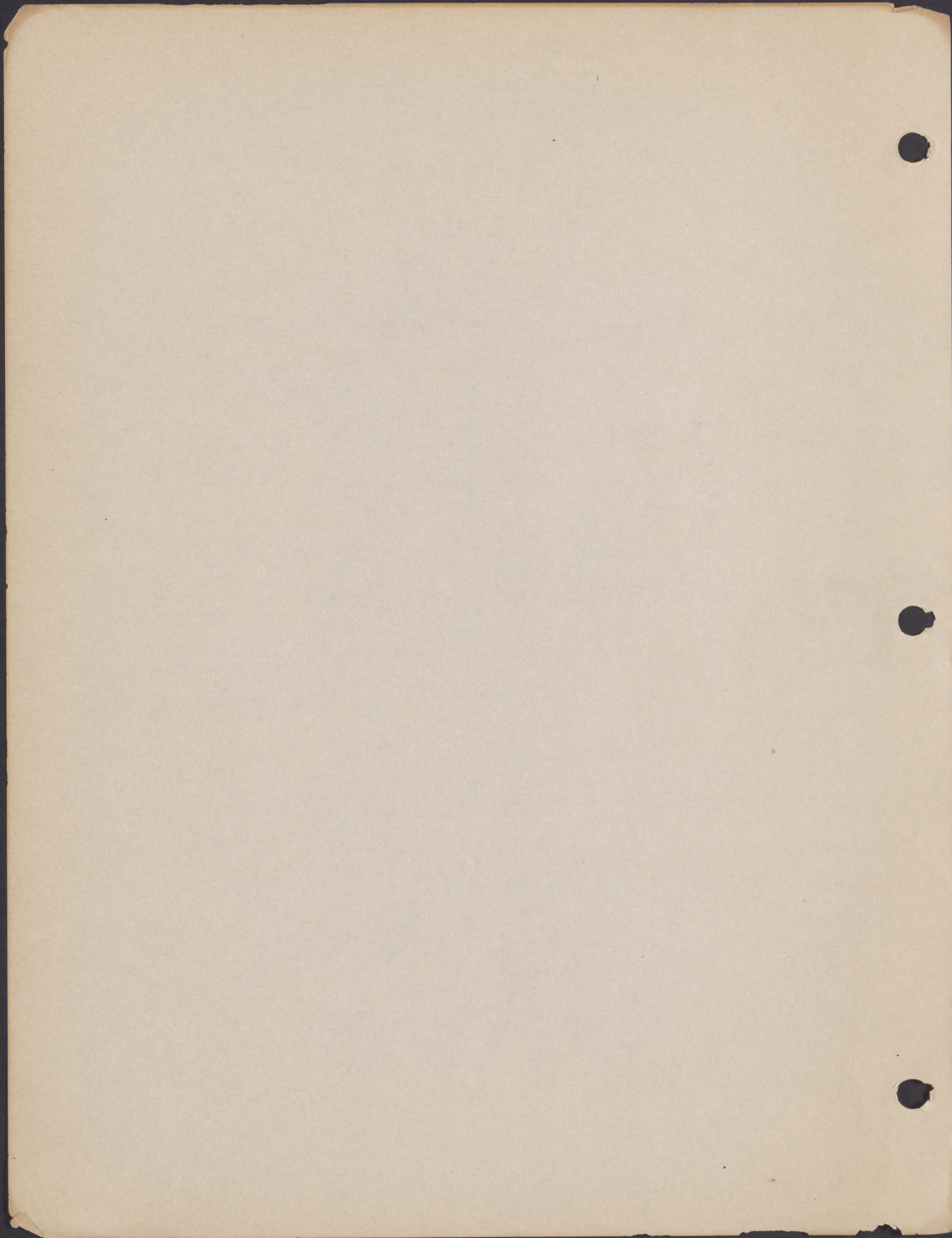
Required = 27.5

58 x 50

$$S - 2" \times 8" = 15.23$$

$$S - 2 - 2" \times 8" = 30.46$$

Use 2 - 2" x 8" O.K.



House P.W. - Den Addition

10-4-47

Steel Beams -

- (A) Klure and Harris (check length for waste) $\begin{matrix} 4 \\ \text{I} \end{matrix} \begin{matrix} 1/4'' \text{ web} \\ 8'' \end{matrix} - 16' \text{ long} \cdot 18.4^\# S = 14.22$
- (B) Alex Novack - $\begin{matrix} 4 3/4'' \\ \text{I} \end{matrix} \begin{matrix} 3/4'' \text{ web} \\ 9'' \end{matrix} - 18'-0'' \text{ long} : 35^\# \text{ perf } S = 24.73$
- (C) 2 - $\begin{matrix} 2 5/16'' \\ \text{I} \end{matrix} \begin{matrix} 3/16'' \text{ web} \\ 9'' \end{matrix} - 18' \text{ long}.$
- (D) 1 - $\begin{matrix} 2 3/4'' \\ \text{I} \end{matrix} \begin{matrix} 5/16'' \text{ web} \\ 8'' \end{matrix} - 15'-4 3/4'' \text{ long} \cdot 20.5^\# S = 15.05$
- (E) $\begin{matrix} \text{I} \end{matrix} 10'' \text{ Junior Beams} - 34'-0'' \text{ long} : 8.96^\# S = 7.78(\text{over})$
 $28 = 15.56$
- 8"-I-17 1/2 #

(A) Deflection = .596" - 16' Span - $\frac{.596}{16 \times 12} = .0031 = \frac{1}{320}$ O.K.

$\frac{16 \times 12}{.596} = 321 \approx \frac{1}{321}$

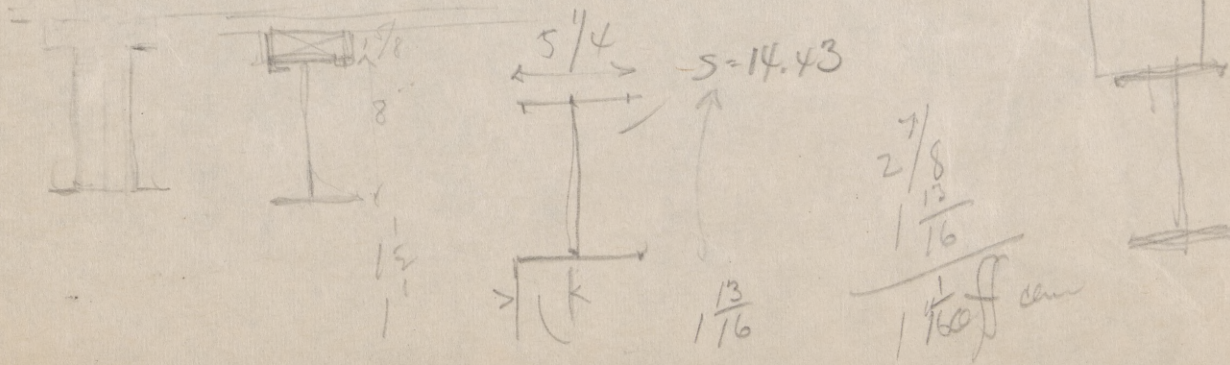
(E) Deflection = .477

First choice (D) - check (3" short?) - Cast $20^\# \times 15.4' = 308 \times .05 = 15.40$

Second choice (A) - Look again check length and straightness
 Shorter haul. no sand.

Check method of anchorage.

(B) - Much too expensive - twice weight needed.



10-26-47

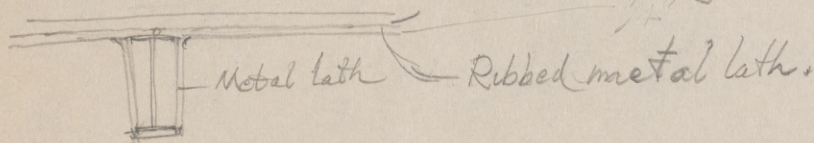
Comparison of 10" Junior Beams with 2"x12" Joists

10" J.B. 8.96[#]

$$8.96 \times .06 = .5376 \text{ per ft}$$

$$\text{Joist} = 2' \times 12' \times 12.5 = 2' \times 12.5 = 25 \text{ \# per ft}$$

2" Concrete Pea gravel. — Electric weld mesh.



$$f_s = 20000 \quad f_c = 850 \quad R = 144$$

Live load	40 [#]
Slab	24 [#]
Fin floor	5 [#]
Ceiling	10 [#]
Total	79 [#]
Use	80 [#]

? Spacing 4'-0" o.c

$$M = \frac{wL^2}{10} =$$

$$12d^2 = \frac{M}{K}$$

$$d = \sqrt{\frac{M}{6K}}$$

$$d = \frac{80 \times 4 \times 4 \times 12}{10 \times 12 \times 144} = .89$$

$$\sqrt{89 \frac{1 \times 1 \times 1 \times 1}{1 \times 1 \times 1 \times 1}}$$

1" 2" Total thickness O.K

$$d = .945$$

$$\text{Load on JB} = 4' \times 17' \times 80 \text{ \#}$$

$$M = \frac{wL^2}{8} = \frac{4 \times 17' \times 80 \times 17 \times 12}{8 \times 20000}$$

$$S \frac{M}{f} = 6.94$$

$$\frac{5 \times 20 \times 1 \times 1 \times 1 \times 1}{1 \times 1 \times 1 \times 1 \times 1}$$

$$10" \text{ J.B. } S = 7.78 - \text{O.K.}$$

Oil Tank - D.W.

House P.W. Den Addition

2-27-48

Joists under Den - Span 17'-0" - Load 46[#] - Spacing 4'-0"

$$W = 46 \times 4 \times 17 = 3120^{\#}$$

$$2" \times 14" \text{ good for } 2323 \times 1.23 = 2830^{\#}$$

Select Structural good for

$$S = \frac{W}{f} = \frac{W \cdot e}{8f} = \frac{3120 \times 17 \times 12}{8 \times 1200} = 66.2$$

$$S = 2" \times 14" = 49.36 \times 1.23 = 60.6 - \text{Not enough}$$

$$S = \frac{W \cdot e}{8f} = W = \frac{58f}{l} = \frac{60.6 \times 8 \times 1200}{17 \times 12} = 2860$$

$$\frac{2860}{4 \times 17} = 42^{\#} \text{ O.K. } \boxed{\text{Use } 2" \times 14" \text{ S1E}} \text{ - Select Structural}$$

Joists under Rec Hall - Span 11'-0" - Load 46[#]

$$S = \frac{W \cdot e}{8f} = \frac{11 \times 46 \times 11 \times 12}{8 \times 1200} = 27.85$$

$$S \text{ for } 2" \times 10" = 28.5 \text{ O.K. } \boxed{\text{Use } 2" \times 10" \text{ S1E}}$$

Joists over Den - Span 16'-0" - Load 46[#] - Spacing 4'-0"

$$W = 46 \times 4 \times 16 = 2944^{\#}$$

$$1-2" \times 12" \text{ good for } 4791^{\#} \times 2 = 3582^{\#} - \text{O.K.}$$

Use 2-2" x 12" + 2-2" x 3" ALL S4S

$$\text{Try } 2" \times 10" R_o = 1,222 \times 1.23 \times 2 = 3050 - \text{O.K.}$$

$$\boxed{\text{Use } 2-2" \times 10" R_o (S2E) + 2-2" \times 4" S.4S.}$$

$$\begin{array}{r} 64 \\ 46 \\ \hline 384 \\ 2576 \\ \hline 2944 \end{array}$$

CRONIN

House P.W. Den Addition

3-3-48

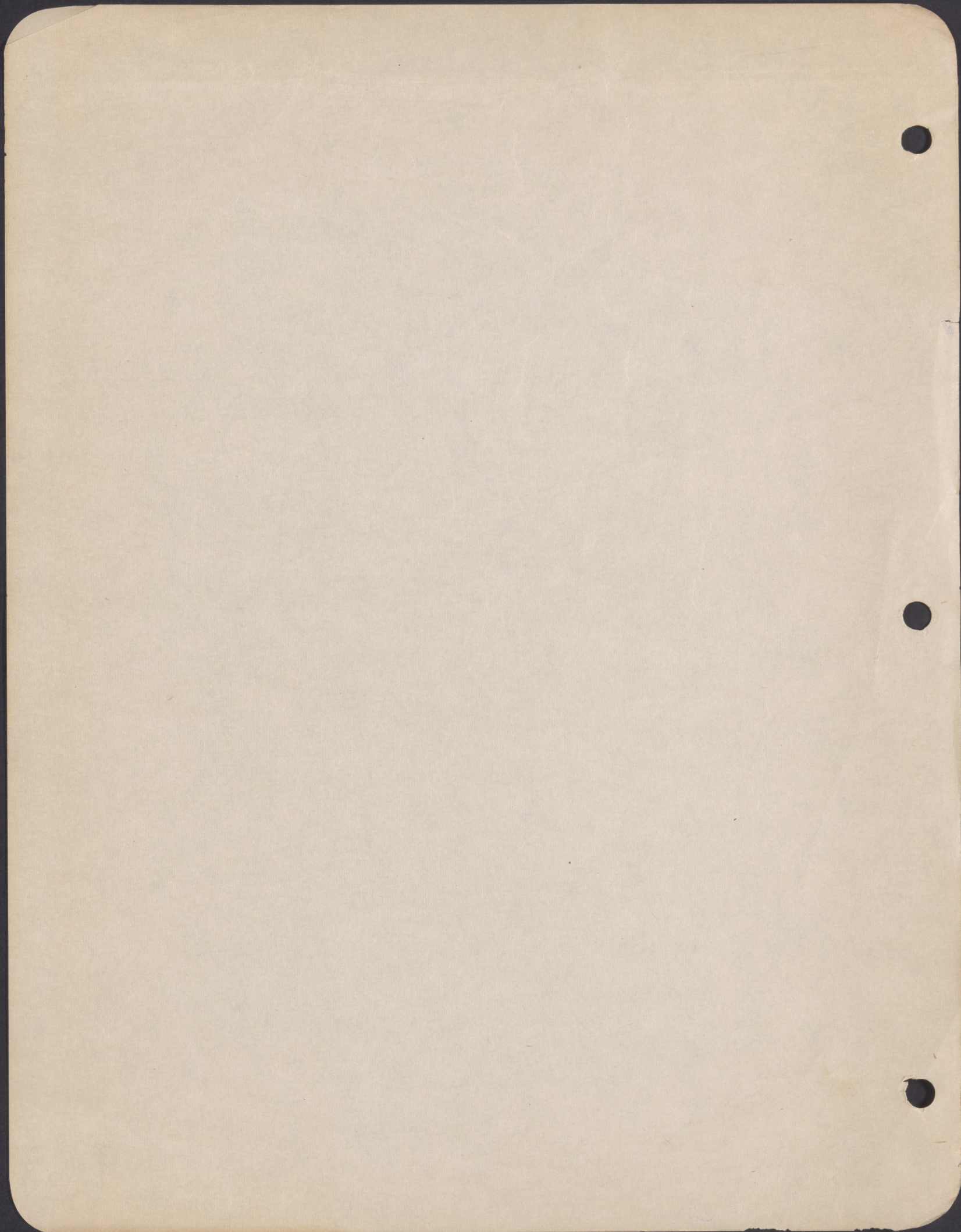
Rafters over 2nd Story Bed Room, Span 18'-0" Load 45[#]/_{ft}²
Spacing 4'-0"

$$W = 4 \times 18 \times 45 = 3240 \text{ #}$$

2"x12" S4S good for 1592 #

Try 2"x2"x12" Ro - $1592 \times 2 \times 1.23 = 3916 = \text{O.K.}$
Use $\nearrow$

$$\begin{array}{r} 72 \\ 45 \\ \hline 360 \\ 288 \\ \hline 3240 \end{array}$$



House P.W. Den Addition -

3-22-48

Area of Sheep Wire Fencing - 4" x 12" mesh #12 1/2 wire.

#12 1/2 ga = approx 0.10" diameter.

$$\text{Area} = \frac{1}{4} \pi d^2 = \frac{0.7854 \times 0.10 \times 0.10}{(5" \text{ per ft})} = .007854$$

$$\frac{4}{2} \times .007854 = .015708 \text{ per sq ft. average..}$$

$$.015708 \times 3.4 \frac{\#}{\text{ft}} = \frac{\$9.00}{330' \times 2.94'} = .935 \text{ ¢ per sq ft.}$$

$$.0534 \text{ # per sq ft}$$

$$\frac{.935 \text{ ¢ per sq ft}}{.0534 \text{ #}} = 17.5 \text{ ¢ per lb.}$$

$$\frac{.935}{.0534} = 17.5$$

$$970' \text{ per roll.}$$

$$\text{Area required} = 11' \times 95' \times 5' = 5225 \text{ sq ft}$$

At M.W. prices - Sheep Wire from 8.3 + 8.8 ¢ per lb.

6" x 6" mesh. #10 x #10 wire at 3 ¢ per sq ft =

$$\text{Wt #10 wire} = .13 \text{ K} \times 1.24 \times 7.854 \times 3.4 = .046 \text{ # per ft}$$

$$.046 \times 4 = .184 \text{ #} \quad \frac{3 \text{ ¢}}{.184} = 16.3 \text{ ¢ per lb.}$$

Sheep wire is about half price of 6" x 6" x #10 x #10 @ 3 ¢ per sq ft.

Also sheep wire is galvanized

$$\text{Pencil Steel.} = .014 \text{ # per ft} = 16.5 \text{ ¢ per ft}$$

$$\frac{1.65 \text{ #}}{.014 \text{ #}} = 11.8 \text{ ¢ per lb.}$$

$$\begin{array}{r} 39 \text{ } 13 \\ 117 \text{ } 47 \\ \hline 156 \end{array}$$

Use sheep wire for stucco as well as for plastering on bank.

$$1" \text{ mesh 20 ga wire weighs } \frac{450 \text{ #}}{43} = .01045 \text{ # per sq ft}$$

$$\text{Heavy sheep wire weighs } \frac{279 \text{ #}}{474 \times 330'} = .216 \text{ per ft.}$$

Use sheep wire 47" wide heavy wt. 6" spacing 23.40 per 20 yd. bale.

$$\frac{.216}{2 \times 3.4} = .0318 \text{ # per ft} \quad \text{As} = .0025 \times 1 \frac{1}{2} \times 12 = .045 \text{ # per ft}$$

$$\frac{.0318}{1 \frac{1}{2} \times 12} = .00177 \text{ % reinforcing}$$

2

410

Mesh 12 x 4

~~New bike~~, 12 1/2 gauge 10 ga 12 x 4

~~Constr. bike~~ 35"

7' wide mesh. 3¢⁰ 6 x 6 x #10 #10 about
8-5. 12-1 ~~¢~~ wt 0.19444 = 15¢ per lb

7 x 3 ~~¢~~ 700 x 3¢ = 21.00 $\frac{3}{0.1944}$ 15.4¢ per lb

Wt - #10 wire .04861 =

1/4" .2437 #3 g = 15.84 @ .0165 per ft.

~~¢~~ $\frac{.165 \text{ per } 100}{15.84} = .0104 \text{ per } \#$
10.4¢ per lb

#10 wire (6" x 6" mesh)

Area = .01434 x 2 = .02862 per ft

Area #3 wire .04664

$\frac{.04664}{.02862} = 1.62' = 19\frac{1}{2}" \text{ O.C}$

Sheep Wire

Memorandum from

Date

4310

Paul - East

Copy of DI *

Transcom

27½



SUMMERBELL

ADAMS
6166

RE-ELECT

JOHN N. HARTNETT

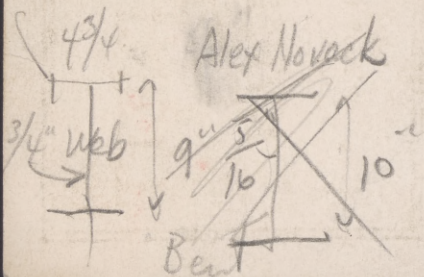
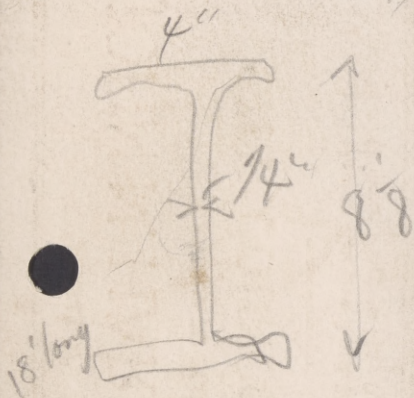
CANDIDATE FOR

CITY COUNCILMAN

Primary Election April 25, 1927.

General Election May 9, 1927.

Blute & Harris - 10-7-45



RE-CT

JOHN N. HARTNETT

CANDIDATE FOR

CITY COUNCILMAN

Primary Election April 25, 1927.

General Election May 9, 1927.

728-47

$\frac{3}{8} \times 12"$ Plate

15'-8" long for

Built up beam under
Partition

Not Recessed

10-9-47

2-9" L^s - 18' $\times$ 2 $\frac{5}{16}$

$\frac{3}{16}"$ + web

1-8" I - 15'-4 $\frac{3}{4}"$ long

$\frac{5}{16}"$ web

10" Junior Beams $\times$ 2 $\frac{3}{4}"$

34' long - 6¢

5¢

Use masking cement for
covering windows + frames
when whitewashing house?



File House
Den Add.

ADHESIVES and PLASTIC MATERIALS *for*

Builders

Decorators

Fixture Shops

Maintenance

ACORN SUPPLY CO.

ADHESIVES — DECORATIVE PLASTICS

1011 West Eleventh Street

Los Angeles 15

Richmond 9381

Adhesives and Plastic Materials

DECORATIVE

Farlite Decorative Plastic Board
Plastic Wall Coverings
Metal and Plastic Mouldings
Plastic Grouting Material
Adhesives for Plastic Board

WALL AND CEILING

Acoustical Tile Adhesive
Tile and Wallboard Adhesives
Cement for Decorative Metal Sheets and Trim
Cement for Plasterboard to Studding Without Nails
Setters' Cements for Ceramic, Plastic and Metal Tile
Waterproof Cement for Sinks and Shower Stalls
Glass and Mirror Cements for Wall Mounting, Show Case and Window Fitting

CONSTRUCTION

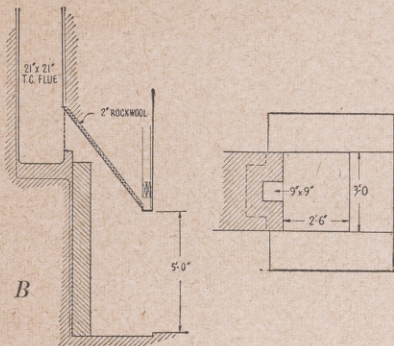
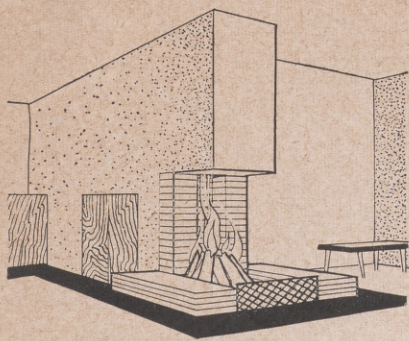
Hard Cement for Setting Screeds and Sleepers
Cement for Setting Slab Facings on Mantels
Stair Tread Bonding Cement for Concrete or Steel
Bulletin-Board Mounting Cement
Blackboard Mounting Cement
Sign Mounting Cement

SHOP

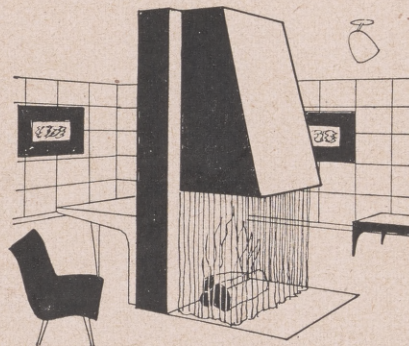
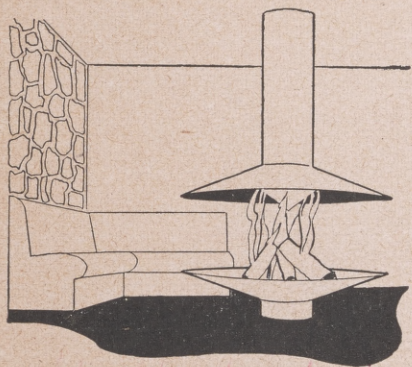
Famowood Wood Putty
Caulking Compound, Natural and Colored
Casein and Resin Glues
Starch-Resin Glue, Ready-Mixed
Guaranteed Waterproof Glue
Plastic Treatment for Hardening Plaster
Hardite Wood Tempering
Masking Cement
Trim and Upholstery Cements
Adhesives for All Purposes

*for windows +
frames wh
whitewashing use*

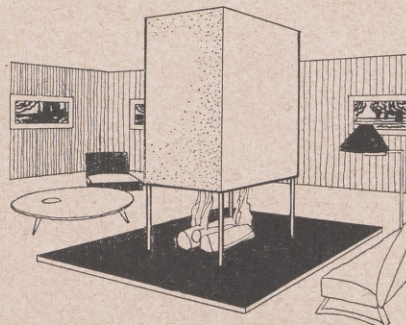
ACORN SUPPLY CO.
Richmond 9381



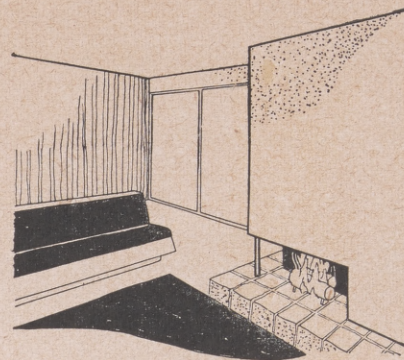
This shows an open fireplace at the end of a wall dividing activity areas within an all-purpose room or partially separating two rooms. Fire is visible from three sides. Detail A is section showing smoke channel in center of rear fire wall. Channel runs from firebed to smoke chamber, effectively carries off smoke. Detail B is cross section showing construction details of parts located in wall overhang.



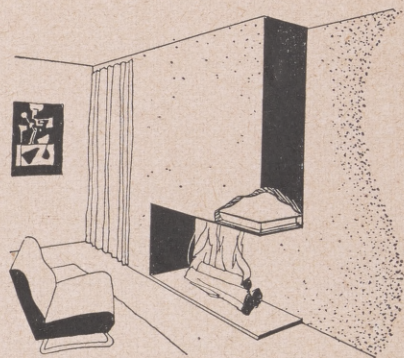
Hooded fireplace backed against free-standing masonry wall is shown above. Whether used this way, or conventionally against solid wall of room, hooded fireplaces are coming into their own. All necessary fireplace parts are concealed under metal hood leading to flue.



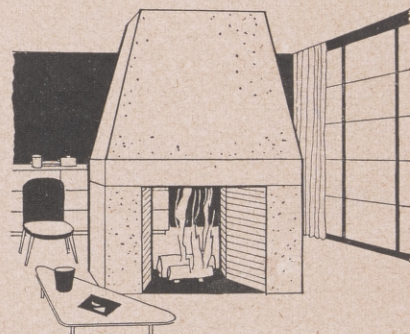
In this variation of free-standing fireplace, omitting both sides and back, fire is visible from all four sides. Metal pipes support masonry. While appearance of open fireplace is dramatic when fire is burning, its prominence may be a handicap when the pleasing, warming effect of flames is gone and all that is left of the fire are cold, dead ashes.



With one side and front open, fireplace permits both enjoyment of view and look at fire. Conventional, recessed fireplace in this position would prevent one or the other. If sitters face the front of fireplace, they would be forced to look directly into light glare from windows.



Wall overhang for smoke chamber and flue above open fireplaces can be supported in several ways. One method is to use pipe supports in open corners as in drawing above. Or metal or concrete cantilevered beams can be used as shown here.



Back wall omitted here but side walls retained. Open fireplaces of this kind are frequently located in free-standing unit in center of large room or in wall separating parts of the same room. Vertical side wall of fire opening is set at broad V-angle from center to direct an equal amount of heat to both sides of room. Free-standing unit requires considerable space.

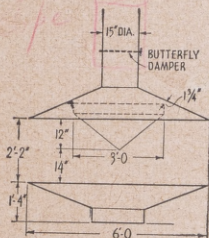
Open fireplaces

NON-RECESSED or open fireplaces are rapidly becoming increasingly, and deservedly, popular.

In combination rooms, living-dining, dining-kitchen, or study-living-dining, the advantage of a fire that can be seen from more than one angle is obvious.

All of the various types of open fireplaces work on the same principle as the recessed wall type. The rules for fireplace proportions, flue sizes, throat, damper, smoke shelf, and smoke chamber must be followed. (See *Sunset*, February, 1948.) Since the fireplace opening is enlarged in any type of open fireplace, all sizes of parts will be increased proportionately.

Illustrated here are variations of the open fireplace with a diagram of a typical open fire hood assembly.



Free-standing firepit is modern adaptation of primitive open cooking fire in center of room. Hood carries off smoke efficiently instead of relying on hole cut in roof as did primitive builders. Chimney damper controls draft. Sheet metal cone, suspended on brackets at flue throat, reflects heat and operates as smoke shelf preventing back draft.

Paint tips

Good ideas from master-painters

KILLING PAINT ODORS

Charcoal will kill the odor of a freshly painted room. Hang up a cloth sack containing a pound or two of charcoal and it will absorb the odor.

HOW TO HOLD A BRUSH

If paint drips down your arm while you're applying it to ceiling, a wall, or a high shelf, you may not be handling your brush professionally or correctly.

Hold the brush well up against the palm of your hand so that three fingers can rest on the metal band. Dip it into the paint to a depth of half the bristle. Slide the brush along the inside rim of the can to remove excess paint. You'll leave your paint can in better condition and at the same time the paint works into the brush to insure a longer, even stroke.

SAVING HALF-USED PAINT

You can salvage half-used paint if you follow this simple procedure:

1. If a skin has formed on the surface, skim it off carefully and discard.
2. Pour two-thirds of the paint into a wide-mouthed pan or jar.
3. Stir the remaining paint until it is smooth and uniform in color.
4. Gradually stir in the top paint.
5. Smooth by pouring paint from one container to the other until there are no lumps.
6. If necessary, strain through a cheese cloth or wire screen before using.

PREVENTION OF DUST SPECKS

Even if you're careful, dust specks may appear on a finished coat of varnish. Although it is impossible to cover them after they have reached noticeable tack, you can pick them off with burnt varnish as work progresses. To prepare burnt varnish, melt a small quantity of crushed rosin in a can placed in a pan of water. Mix 1 part varnish to 6 parts melted rosin. To apply, moisten your fingers slightly and roll a small piece into a ball. Place the ball on the end of a stick and apply it to dust specks. Keep the surface of the ball clean by rolling it between applications. Before use, allow a newly varnished or enameled surface to set over night, then mop with cold water and let dry. This improves gloss and prevents dust sticking to the surface.

PROTECTION FOR EYES

Protect your eyes when you're painting overhead. Army-type night vision goggles with clear plastic lenses set at a wide angle are easy to wipe free of splatters and will guard your eyes from dripping paint.



Easy lies the head...

Your tasks look less tiring when electrical helpers are poised for your signal. In your all-electric home, they make molehills out of mountains of work. Soiled clothes come cleaner faster. Dirt comes out of hiding and surrenders quickly. Meals almost cook themselves. Keeping house electrically lets you sleep soundly at night, with no weary aches from the day, and no fears for the morrow.

THIS WAY TO HAPPIER HOUSEKEEPING

When you plan to build or remodel, investigate electrical living. The services of an adequate Wiring Advisor are available without cost or obligation, through your nearest Edison office.



Southern California Edison Company

10-23-48

$$\frac{19.68}{2} = 9.84"$$

$$d = 19.68" \quad \phi 61\frac{3}{4}"$$

Grand Terrace Implement Exchange

Weston - 2059 J.

Base 42" Wheels with holes for $\frac{1}{4}"$ Axle.

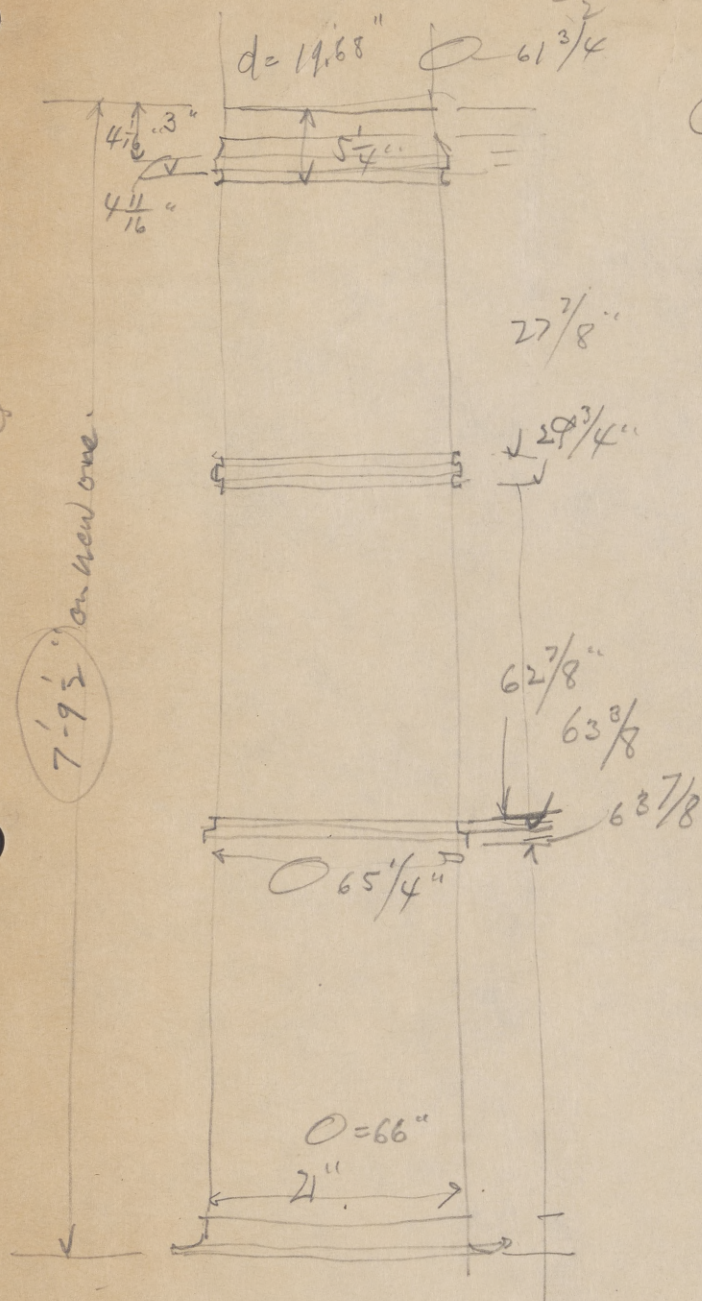
Also 29 $\frac{1}{2}"$ wheel with $\frac{1}{8}"$ bent axle.

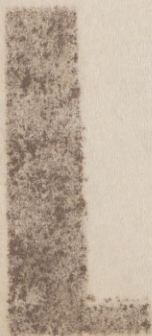
Dens Addition

Measurements of
Set tube for
Dens Fireplace.

7-11 $\frac{1}{2}"$ or old ones

7-9 $\frac{1}{2}"$ on new one.





Wing Fly
Corona A11+
Mag Co

8-16-50

WT 115^g

27

5 equal
5 beads

3/4 hole
3/8 hole

mag. 28

3 1/2
3 1/2

ARITHMETIC FUNDAMENTALS
ENGLISH ESSENTIALS
SHORTHAND

TYPING, BEGINNING (JR. HI

TYPING, BEGINNING (JR. HI

TYPING, BEGINNING (HIGH S

TYPING, BEGINNING (JR. HI

TYPING, INTERMEDIATE AND

DRIVER EDUCATION AND TRAI

DRIVER EDUCATION AND TRAI

MATH. REVIEW (7TH & 8TH G

MATH. REVIEW (7TH & 8TH G

MATH. REVIEW (7TH & 8TH G

HANDICRAFT*

HANDICRAFT*

BAND, ADVANCED*

BAND, INTERMEDIATE*

ORCHESTRA*

BAND, BEGINNING*

SEWING*

SEWING*

PAINTING AND DRAWING*

PAINTING AND DRAWING*

SPEECH*

PSYCHOLOGY (College only)

TIMM ALUMINUM

(OUTSWINGING CASEMENT OR FIXED SASH) STOCK SIZES

2'-2"	1'-7 $\frac{1}{8}$ "	1'-11 $\frac{1}{8}$ "	3'-1"	3'-9 $\frac{1}{8}$ "	3'-1"	3'-9 $\frac{1}{8}$ "	4'-5 $\frac{1}{8}$ "	5'-9 $\frac{3}{8}$ "	7'-1 $\frac{5}{8}$ "	8'-5 $\frac{7}{8}$ "
1212	1212W	2212	2212W	2222	2222W	3222	4222	5222	6222	
3'-2 $\frac{3}{8}$ "										
1313	1313W	2313	2313W	2323	2323W	3323	4323	5323	6323	
4'-2 $\frac{5}{8}$ "										
1414	1414W	2414	2414W	2424	2424W	3424	4424	5424	6424	
5'-3"										
1514	1514W	2514	2514W	2524	2524W	3524	4524	5524	6524	
6'-3 $\frac{1}{2}$ "										
1614	1614W	2614	2614W	2624	2624W	3624	4624	5624	6624	

Fixed Sash (non-opening windows) are available in all sizes shown. Order by specifying the first two digits only of the stock number.

Example: 12 - 12W - 22 - 22W - 32 - 42 - etc.

Basic glass sizes used in all Timm sash are standard lights 12x16, 12x18, 12x20, 12x22.

Where muntin bar arrangements other than standard layouts are used we will be glad to furnish glass sizes on request.

1. Dimensions shown are over all sizes of sash.
2. Sash shown with single vents may be ordered either right or left hand. Left hand vents are illustrated for single vent opening. Left hand sash have hinges on left when viewed from outside.
3. Sizes and types other than those shown are available. Prices on application.
4. Types and sizes shown approved by The Metal Window Institute.
5. All sash furnished complete with hardware, glazing clips and screws for installation.
6. Screens furnished at extra cost if desired.

TIMM INDUSTRIES, INC.

5245 WEST SAN FERNANDO ROAD
LOS ANGELES 26, CALIFORNIA

Sears

TIMM ALUMINUM

OUTSWING CASEMENT OR FIXED SASH - STOCK SIZES

2'-2"										
	1212	1212W	2212	2212W	2222	2222W	3222	4222	5222	6222
3'-2 3/8"										
	1313	1313W	2313	2313W	2323	2323W	3323	4323	5323	6323
4'-2 5/8"										
	1414	1414W	2414	2414W	2424	2424W	3424	4424	5424	6424
5'-3"										
	1514	1514W	2514	2514W	2524	2524W	3524	4524	5524	6524
6'-3 1/2"										
	1614	1614W	2614	2614W	2624	2624W	3624	4624	5624	6624

Fixed Sash (non-opening windows) are available in all sizes shown. Order by specifying the first two digits only of the stock number.

Example: 12 - 12W - 22 - 22W -
32 - 42 - etc.

Basic glass sizes used in all Timm Sash are standard lights 12x16, 12x18, 12x20, 12x22.

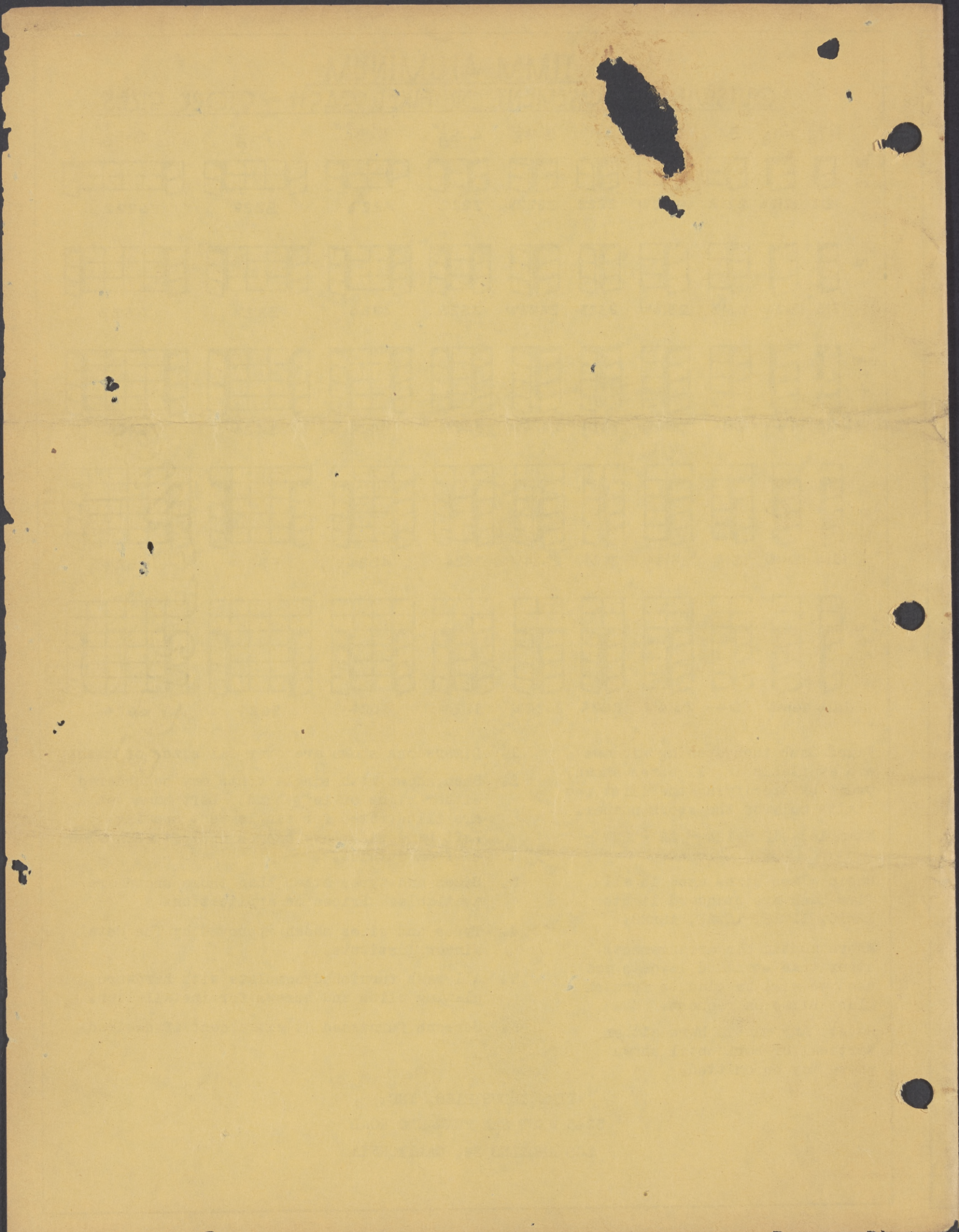
Where muntin bar arrangements other than standard layouts are used we will be glad to furnish glass sizes on request.

Note: Any muntin bars either vertical or horizontal shown above may be omitted.

1. Dimensions shown are over all sizes of sash.
2. Sash shown with single vents may be ordered either right or left hand. Left hand vents are illustrated for single vent opening. Left hand sash have hinges on left when viewed from outside.
3. Sizes and types other than those shown are available. Prices on application.
4. Types and sizes shown approved by The Metal Window Institute.
5. All sash furnished complete with hardware, glazing clips and screws for installation.
6. Screens furnished at extra cost if desired.

TIMM INDUSTRIES, INC.
5245 WEST SAN FERNANDO ROAD
LOS ANGELES 26, CALIFORNIA

Seaw



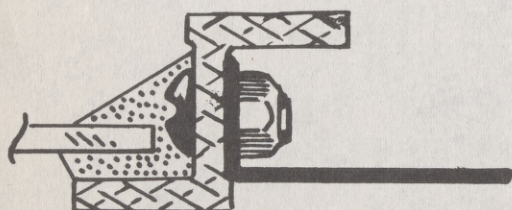
TIMM ALUMINUM

OUTSWINGING CASEMENT OR FIXED SASH - FOR MODULAR BLOCK CONSTRUCTION

	1'-4"	2'-0"	2'-8"	3'-4"	2'-8"	3'-4"	4'-0"	5'-4"	6'-0"	8'-0"
2'-0"										
	B-1212	B-1212W B-2212	B-2212W	B-2222	B-2222W	B-3222	B-4222	B-5222	B-6222	
3'-0"										
	B-1313	B-1313W B-2313	B-2313W	B-2323	B-2323W	B-3323	B-4323	B-5323	B-6323	
4'-0"										
	B-1414	B-1414W B-2414	B-2414W	B-2424	B-2424W	B-3424	B-4424	B-5424	B-6424	
5'-0"										
	B-1514	B-1514W B-2514	B-2514W	B-2524	B-2524W	B-3524	B-4524	B-5524	B-6524	
6'-0"										
	B-1614	B-1614W B-2614	B-2614W	B-2624	B-2624W	B-3624	B-4624	B-5624	B-6624	

Fixed Sash (non-opening windows) are available in all sizes shown. Order by specifying the first two digits only of the stock number.

Example: B-12, B-12W, B-22, B-22W, B-32, B-42, etc.



Fins as illustrated available for masonry construction.

1. Dimensions shown are over all sizes of sash.
2. Sash shown with single vents may be ordered either right or left hand. Left hand vents are illustrated for single vent opening. Left hand sash have hinges on left when viewed from outside.
3. Sizes and types other than those shown are available. Prices on application.
4. Types and sizes shown approved by The Metal Window Institute.
5. All sash furnished complete with hardware, glazing clips and screws for installation.
6. Screens furnished at extra cost if desired.

TIMM INDUSTRIES, INC.

5245 WEST SAN FERNANDO ROAD

LOS ANGELES 26, CALIFORNIA

Seano

TIMM ALUMINUM

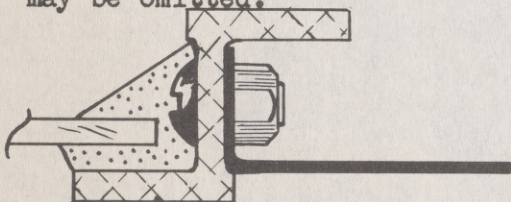
OUTSWINGING CASE OR FIXED SASH - FOR MODULAR OR BLOCK CONSTRUCTION

	1'-4"	2'-0"	2'-8"	3'-0"	2'-8"	3'-4"	4'-0"	5'-4"	6'-0"	8'-0"
2'-0"										
	B-1212	B-1212W	B-2212	B-2212W	B-2222	B-2222W	B-3222	B-4222	B-5222	B-6222
3'-0"										
	B-1313	B-1313W	B-2313	B-2313W	B-2323	B-2323W	B-3323	B-4323	B-5323	B-6323
4'-0"										
	B-1414	B-1414W	B-2414	B-2414W	B-2424	B-2424W	B-3424	B-4424	B-5424	B-6424
5'-0"										
	B-1514	B-1514W	B-2514	B-2514W	B-2524	B-2524W	B-3524	B-4524	B-5524	B-6524
6'-0"										
	B-1614	B-1614W	B-2614	B-2614W	B-2624	B-2624W	B-3624	B-4624	B-5624	B-6624

Fixed Sash (non-opening windows) are available in all sizes shown. Order by specifying the first two digits only of the stock number.

Example: B-12, B-12W, B-22, B-22W, B-32, B-42, etc.

Note : Any muntin bars either vertical or horizontal shown above may be omitted.



Fins as illustrated available for masonry construction.

1. Dimensions shown are over all sizes of sash.
2. Sash shown with single vents may be ordered either right or left hand. Left hand vents are illustrated for single vent opening. Left hand sash have hinges on left when viewed from outside.
3. Sizes and types other than those shown are available. Prices on application.
4. Types and sizes shown approved by The Metal Window Institute.
5. All sash furnished complete with hardware, glazing clips and screws for installation.
6. Screens furnished at extra cost if desired.

TIMM INDUSTRIES, INC.
5245 WEST SAN FERNANDO ROAD

Sears

TIMM ALUMINUM

OUTSTANDING CASES FOR FIXED SASH - FOR MODULAR OR BLOCK CONSTRUCTION



1. Dimensions shown are over all sizes of case.
2. Sash shown with single vents may be ordered either right or left hand. Left hand vents are illustrated for single vent opening.
3. Left hand sash have hinges on left when viewed from outside.
4. Sizes and types other than those shown are available. Prices on application.
5. Types and sizes shown approved by The Metal Window Institute.
6. All sash furnished complete with hardware, glassing clips and screws for installation.
7. Screens furnished at extra cost.

TIMM INDUSTRIES, INC. 2245 WEST SAN FERNANDO ROAD, LOS ANGELES, CALIF. 90018

8. Fixed sash (non-opening windows) are available in all sizes shown.
9. Order by specifying the case two digits only of the stock number.
10. Examples: B-101, B-102, B-103, B-104, B-105, B-106, B-107, B-108, B-109, B-110, B-111, B-112, B-113, B-114, B-115, B-116, B-117, B-118, B-119, B-120, B-121, B-122, B-123, B-124, B-125, B-126, B-127, B-128, B-129, B-130, B-131, B-132, B-133, B-134, B-135, B-136, B-137, B-138, B-139, B-140.
11. Note: 1. Any window frame either vertical or horizontal shown above may be called.



Plans as illustrated available for factory construction.



SHOPPING BAG MARKET, Puente, California
 (8) 122' Glued Laminated Bowstring Trusses
 Fabricated and Erected by:
 STANDARD STRUCTURES OF SOUTHERN CALIFORNIA

